

PRE-BID CONFERENCE

IFB 2000001542

TITLE: Sewer Lines and Manhole Rehabilitation, in and near Colonial Avenue in Alexandria, VA

A mandatory pre-bid conference will be held at 10:00 A.M. on May 27, 2015 at the Fairfax County Government Center, 12000 Government Center Parkway, Conference Room 7, Fairfax Virginia. The purpose of this conference is to allow potential bidders an opportunity to present questions and obtain clarification relative to any facet of this solicitation. Bidders who arrive late **will not** be able to sign the attendance sheet; therefore, please plan accordingly.

NO ONE WILL BE ADMITTED AFTER 10:10 A.M.

A mandatory site visit will be held after the pre-bid conference at 8801 Surrey Court, Alexandria, VA 22309.

Due to the importance of all bidders having a clear understanding of the specifications/scope of work and requirements of this solicitation, attendance at this conference/site visit will be a prerequisite for submitting a bid. Bids will only be accepted from those bidders who are represented at this pre-bid conference/site visit. Attendance at the conference/site visit will be evidenced by the representative's providing their name, company name, and telephone number/e-mail on the attendance sheet. Bring a copy of the solicitation with you. Any changes resulting from this conference will be issued in a written addendum to the solicitation.

All questions pertaining to this IFB should be submitted in writing to the contract specialist at dpsmteam2@fairfaxcounty.gov prior to the pre-bid conference.



FAIRFAX COUNTY

DEPARTMENT OF PURCHASING & SUPPLY MANAGEMENT

12000 GOVERNMENT CENTER PARKWAY, SUITE 427
FAIRFAX, VIRGINIA 22035-0013

www.fairfaxcounty.gov/dpsm

V I R G I N I A

TELEPHONE: (703) 324-3201 FAX: (703) 324-3228 TTY: 1-800-828-1140

ISSUE DATE: May 13, 2015	INVITATION FOR BID: IFB 2000001542	FOR: Sewer Lines and Manhole Rehabilitation, in and near Colonial Avenue in Alexandria, VA
DEPARTMENT: Wastewater Collections	DUE DATE/TIME: June 19, 2015 @ 10:00 a.m.	CONTRACT SPECIALIST: Yong Kim /703-324-2163 or; yong.kim@fairfaxcounty.gov

Bids - In accordance with the following and in compliance with all terms and conditions, unless otherwise noted, the undersigned offers and agrees, if the bid is accepted, to furnish items or services for which prices are quoted, at the price set opposite each item, delivered or furnished to designated points within the time specified. It is understood and agreed that with respect to all terms and conditions accepted by Fairfax County the items or services offered and accompanying attachments shall constitute a contract.

Note: Fairfax County does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment in the performance of its procurement activity.

NAME AND ADDRESS OF FIRM:

Telephone/Fax No.:

E-Mail Address:

Federal Employer Identification No or

Federal Social Security No.(Sole
Proprietor)

Prompt Payment Discount: ___% for payment within ___days/net
___days

State Corporation Commission (SCC)
Identification No.

By signing this bid, Bidder certifies, acknowledges, understands, and agrees to be bound by the conditions set forth in the General Conditions and Instructions to Bidders as described in Appendix A, the Certification Regarding Ethics in Public Contracting set forth in Appendix B, and by any other relevant certifications set forth in Appendix B.

BUSINESS CLASSIFICATION – Described in Appendix B - CHECK ONE: ☐ LARGE (Y) ☐ SMALL (B)

☐ MINORITY-OWNED SMALL (X) ☐ MINORITY OWNED LARGE (V) ☐ WOMEN-OWNED SMALL (C)

☐ WOMEN OWNED LARGE (A) ☐ NON PROFIT (9)

CHECK ONE: ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ CORPORATION

State in which Incorporated: _____

Vendor Legally Authorized
Signature

Date

Print Name and Title

Sealed bids subject to terms and conditions of this invitation will be received by the Fairfax County Purchasing Agent at 12000 Government Center Parkway, Suite 427, Fairfax, Virginia 22035-0013 on the due date and time specified, and then publicly opened and read.

AN EQUAL OPPORTUNITY PURCHASING ORGANIZATION



SPECIAL PROVISIONS1 INTENT OF CONTRACT:

- 1.1. The intent of this solicitation is to obtain sealed competitive bids to furnish all labor, supervision, materials, equipment, tools, transportation, and supplies required to complete gravity sewer line reconstruction and manhole rehabilitation at Colonial Avenue in accordance with all terms, conditions, plans, and specifications contained herein.

In addition to these Special Provisions and referenced Appendix's within this solicitation, refer to Attachment 1 Technical Specifications Part A, Part A1, and Part B for the complete scope.

- 1.2. Bidders are advised to read the entire solicitation, as it will become part of the resultant contract. Bidders should be mindful of the County's Resource Protection Areas (RPAs), and are responsible for compliance to RPA requirements. In addition, compliance is required to the Fairfax County Noise Ordinance and the Fairfax County Stormwater Management Ordinance, for more information see the following:

Resource Protection Area:

- https://library.municode.com/HTML/10051/level3/THCOCOFAVI1976_CH118CH_BAPROR_ART1GEPRDE.html
- <http://www.fairfaxcounty.gov/dpwes/stormwaterordinance/>
- <http://www.fairfaxcounty.gov/dpwes/environmental/cbay/>

Noise Ordinance:

- <https://www.fairfaxcounty.gov/contact/ProgramDetail.aspx?agId=100084>

Stormwater Management Ordinance:

- <http://www.fairfaxcounty.gov/dpwes/stormwaterordinance/>

- 1.3. Bidders are required to include the following with their bid. **Failure to provide these items will result in the rejection of your bid.**

- Vendor's legal authorized signature (coversheet)
- List of Safety Violations (Ref. Special Provisions paragraph 6; Appendix B-2)
- **Copy** of State of Virginia's Contractor's License (Ref. Special Provisions paragraph 11)
- Experience Qualifications:
 - Current superintendent resume
 - Superintendent's experience record (Ref. Appendix B-5)
 - Three (3) references from similar jobs where work was performed, within the past three (3) years (Ref. Special Provisions, paragraph 7.4.; Appendix B-4)
 - Past Performance Qualifications (Ref. Special Provisions, paragraph 8)
 - Professional Engineer Certification Form (Ref. Special Provisions, paragraph 9; Appendix D)
 - Material, Procedure, and Equipment Qualifications (Ref. Special Provisions, paragraph 10; Appendix C)
- Pricing Schedule (Ref. Appendix B-3)
- Bid Security (Ref. Special Provisions, paragraph 14).

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- 1.4. The following items are included with this solicitation and are available from our website at www.fairfaxcounty.gov/solicitation:

- Appendix F (Odor Control Vent Valves) – Details and specification
- Appendix G (CCTV of Existing Sewer) – CCTV inspection logs of sewer slated for rehabilitated on this Project.
- Appendix H (Rehabilitation List) – Excel list of sewer mains and sewer manholes to be rehabilitated on this project.
- Appendix I (Colonial Avenue Map) – This shows the suggested bypass route, RPA's, and other site information.

Each Bidder must become familiar with the content and incorporate the information contained within them into their bid.

2. PRE-BID CONFERENCE:

- 2.1. A mandatory pre-bid conference will be held on May 27, 2015 at 10:00 A.M. in the Fairfax County Government Center, 12000 Government Center Parkway, Conference Room 7, Fairfax, Virginia. To request reasonable ADA accommodations, call the Department of Purchasing and Supply Management ADA representative at (703) 324-3201 or TTY 711. Please allow two working days in advance of the event to make the necessary arrangements.

NO ONE WILL BE ADMITTED AFTER 10:10 A.M.

- 2.2. A mandatory site visit will be held after the mandatory pre-bid conference at 8801 Surrey Court, Alexandria, VA 22309.

Due to the importance of all bidders having a clear understanding of the specifications/scope of work and requirements of this solicitation, attendance at this conference/site visit will be a prerequisite for submitting a bid. Bids will only be accepted from those bidders who are represented at this pre-bid conference/site visit. Attendance at the conference/site visit will be evidenced by the representative's providing their name, company name, and telephone number/e-mail on the attendance sheet. Bring a copy of the solicitation with you. Any changes resulting from this conference will be issued in a written addendum to the solicitation.

- 2.3. The purpose of the pre-bid conference is to give potential bidders an opportunity to ask questions and to obtain clarification about any aspect of this Invitation for Bid. Bidders may submit any questions pertaining to the IFB, in writing, prior to the pre-bid conference to the contract specialist at yong.kim@fairfaxcounty.gov.

3. SITE INSPECTION:

- 3.1. Each bidder is expected to have become familiar with and take into consideration, site conditions that may affect the work and to check all dimensions at the site.
- 3.2. Each bidder shall acquaint themselves thoroughly as to the character and nature of the work to be done. Each bidder shall make a careful examination of the site of the work and inform themselves fully as to the difficulties to be encountered in performance of the work, the facilities for delivering, storing and placing materials and equipment and other conditions relating to construction and labor.

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- 3.3. Each bidder shall examine the premises and the site and compare them with any applicable drawings and specifications. Each bidder shall familiarize themselves with the existing conditions such as obstructive area levels and any problems related to erecting the required systems.
- 3.4. No plea of ignorance of conditions that exist on the site of the work, or difficulties that may be encountered in the execution of the work, as a result of failure to make necessary investigations and examinations, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of the contract documents and to complete the work, or as a basis for any claim.
- 3.5. The Contractor must employ such methods or means as will not cause interruption of or interference with the work of any other Contractor, or County personnel at the site.

4. COMMENCEMENT AND COMPLETION OF WORK:

- 4.1. The County shall issue a notice to proceed date. The contractor shall initiate work within twenty (20) calendar days after the notice to proceed date. A written notification to commence work will be provided to the County a minimum of ten (10) working days in advance.
- 4.2. Any work scheduled for weekends/holidays must be coordinated with and approved by the County.
- 4.3. Project must be completed within 365 calendar days after notice to proceed.

5. INTERPRETATION OF BID:

- 5.1. Please direct any questions pertaining to this solicitation to:

Yong Kim, Contract Specialist I
 Department of Purchasing & Supply Management
 12000 Government Center Parkway, Suite 427
 Telephone: (703) 324- 2163
 Email: yong.kim@fairfaxcounty.gov

- 5.2. The term "County Project Manager," or similar terms refer to the Owner's representative for technical specifications contract coordination.

6. FAIRFAX COUNTY CONSTRUCTION SAFETY RESOLUTION:

The Contractor shall comply with the resolution adopted by the Fairfax County Board of Supervisors on December 8, 2003, as amended:

- 6.1. It shall be required that each bid submitted to the County for a contract for construction, alteration, and/or repairs, including painting or decorating of a building, highway, street, bridge, sidewalk, culvert, sewer, excavation, grading, or any other construction, include a list of all the following actions which have become final in the three years prior to the bid submission:
 - A. Willful violations, violations for failure to abate, or repeated violations, for which the bidder was cited by (a) the United States Occupational Safety and Health Administration; (b) the Virginia Occupational Safety and Health Administration; or (c) the occupational safety and health plan for any other public jurisdiction; or

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- B. Three (3) or more serious construction safety violations for which the bidder was cited by the (a) United States Occupational Safety and Health Administration; or (b) the Virginia Occupational Safety and Health Administration; or (c) the occupational safety and health plan from any other public jurisdiction.
 - C. Termination of a contract between the contractor and any public entity by their purchasing agent or his designee for safety violations.
- 6.2. If the bidder has not received or been the subject of any such violations referenced in paragraph 6.1 in the three (3) years prior to the bid submission, then the bidder shall so indicate by certification on the bid form entitled Certification of Safety Violations. The bidder will also indicate on this form each state in which work was performed in the three (3) years prior to the bid submission.
- 6.3. No bidder or contractor may bid on a County construction contract who has been the subject of any citations for the type and number of violations listed in aforementioned paragraph 6.1, which have become final within the three (3) years prior to the bid submission.
- A. Notwithstanding the language of paragraph 6.3, above, any bidder or contractor who has been the subject of a violation, as described in paragraph 6.1 A, which has become final in the three (3) years prior to the bid submission, may bid, if the bidder or contractor meets the eligibility criteria set forth in paragraph 6.4, below.
 - B. Notwithstanding the language of paragraph 6.3, above, any bidder or contractor who has been the subject of the type and number of violations as described in paragraph 6.2, which have become final within three (3) years prior to bid submission, may bid, if the bidder or contractor meets the eligibility criteria in paragraph 6.5, below.
 - C. Notwithstanding the language of paragraph 6.1.C, above, any bidder or contractor who has previously been terminated from a public contract, as described in paragraph 6.1.C, within three (3) years prior to the bid submission, may bid, if the bidder or contractor meets the eligibility criteria in paragraph 6.5, below.
- 6.4. Prior to bidding on a project, under the provisions of paragraph 6.3 above, a contractor may request that a determination be made by the County's Purchasing Agent or designee, regarding their eligibility to submit a bid on a contract under the terms of this resolution. However, this request for determination and any subsequent adjudication process must be completed prior to submitting a bid on any project and the request for determination must be received by the County's Purchasing Agent or designee no later than twenty-one (21) days before bids are due unless otherwise stated in the Solicitation. A notice of the bidder's request for determination of eligibility will be posted publicly for comments by any interested party. The bidder's request for determination of eligibility and all supporting documentation provided by the bidder to the County in support of its request shall be open to the inspection of any interested person, firm or corporation in accordance to the requirements of Fairfax County Purchasing Resolution and Virginia Freedom of Information Act.
- 6.5. At the request of the Purchasing Agent or designee, the County Risk Manager shall evaluate a contractor's eligibility. Contractors may be subject to a special audit of their safety records as required. The criteria used by the Risk Manager in evaluating contractor's eligibility shall include but not be limited to the following:
- A. Corrective action taken by a bidder or contractor to prevent the recurrence of safety violations.

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- B. Days Away From Work Incident Rate for the past three (3) years.
- C. Summary of Work-Related Injuries and Illnesses/Incident Rate for the past three (3) years.
 - 1. Worker's Compensation Experience Modification Rating for the past three (3) years.
 - 2. Fatality record for the past five (5) years.
 - 3. Detailed information regarding the firm's safety program including but not limited to a Safety and Health plan and qualifications of the safety personnel.
 - 4. Verification that management staff directly in charge of projects that experienced safety violations listed in aforementioned paragraph A will not be involved in the County project.
 - 5. Incorporation of safety and health related issues into their new employee orientation programs.
 - 6. Incorporation of work safety as a part of an employee's performance evaluation.
 - 7. Support of safety related matters by senior/corporate management. Does the firm have a safety policy statement signed by a member of senior/corporate management?
 - 8. Designation of a full time Safety Manager. Does this person report to a high level, authoritative position within the Company?
 - 9. Frequency and type of safety inspections conducted at work sites.
 - 10. The number and type of safety training programs conducted for employees.
 - 11. Frequency of safety "tailgate meetings" conducted by the firm.
 - 12. Designation of an active safety committee, frequency of their meetings and list of members of the committee.
 - 13. Active membership in a recognized construction safety organization in the Washington Metropolitan area, or in the state of contractor's domicile.
- 6.6. The determination of eligibility rendered by the Purchasing Agent or his designee shall be final unless it is appealed in accordance with the provisions of the solicitation or the Fairfax County Purchasing Resolution.
- 6.7. It shall be a condition of each County construction contract, as discussed above, that no contractor or subcontractor contracting for any part of the contract work shall require any laborer, mechanic, or other person employed in the performance of the contract to work in surroundings or under working conditions which are hazardous or dangerous to his safety, as determined under construction safety standards promulgated by the U.S. Department of Labor or the Virginia Department of Labor and Industry.
- 6.8. The contractor awarded a County construction contract shall certify in writing that they will not knowingly, willfully, or recklessly employ or contract with any person, company, corporation, or any other entity for services pursuant to that contract if such person, company, corporation, or other entity could not have been awarded such contract due to the restrictions in paragraph 6.3, above.
- 6.9. The contractor shall also certify in writing that all safety related information provided in accordance with the Safety Resolution and contract requirements are complete, accurate and truthful.
- 6.10. The failure to provide information requested pursuant to this Resolution or the failure to conform to the certification requirements of this Resolution shall be grounds for disqualifying a prospective bidder.

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6.11. The County may impose the following sanctions upon a contractor who willfully submits any false or misleading certification or information regarding material facts in connection with submissions pursuant to this Resolution, or willfully omits any certification or information regarding material facts in connection with submissions pursuant to this Resolution. The term willful shall include intentional or reckless acts or omissions.

- (1) Disqualify the prospective bidder from bidding a contract.
- (2) Debar the contractor from bidding future contracts for a period not to exceed three years.
- (3) Terminate the contract awarded to the bidder after providing notice and opportunity to be heard.

7. QUALIFICATION CRITERIA - EXPERIENCE:

- 7.1. Bidders must have a work history that includes cleaning of sewers; pre-television inspection; diversion pumping; lining by CIPP method; reinstatement of lateral connections; re-televising and video recording after rehabilitation; inspection and testing; clean-up; rehabilitation of manholes and the installation of flexible fiberglass inserts (top hats) on sewer laterals; and all miscellaneous work as specified in the Technical Specifications.
- 7.2. Bidders must have been in the business for a minimum of three years in North America, and must have successfully rehabilitated, within North America, a minimum of 50,000 linear feet of sanitary sewer, water or sewer pressure pipe using the specific liner material and the specific cured-in-place pipe process proposed in their response to this solicitation.
- 7.3. Bidders must have a superintendent-in-charge of the installation with a minimum of five (5) years of experience prior to bid opening and supervising the installation of CIPP for sanitary sewer pipes in North America. The proposed superintendent-in-charge shall have successfully installed a minimum of 50,000 linear feet of CIPP for sanitary sewer in North America using the specific liner material and the specific cured-in-place pipe process proposed in this solicitation prior to bid opening. Provide a current resume and complete the Superintendent's Experience Record form (ref. Appendix B-5).
- 7.4. Bidders must provide three (3) references of similar projects/jobs where work was performed, within the past three (3) years. List on applicable form in Appendix B-4 the projects/jobs your firm has completed within the last three (3) years for CIPP rehabilitation, while using the specific liner material and the specific cured-in-place pipe process proposed and provide one reference for Manhole Rehabilitation work performed over a period of at least 2 years, minimum of 1000 vertical feet of manhole rehabilitation or 100 manholes.

NOTE: Fairfax County Government (FCG), and Fairfax County Public Schools (FCPS), to include all agencies and authorities, shall be considered as a single entity (one reference) for the purpose of these references.

8. QUALIFICATION CRITERIA - PAST PERFORMANCE:

- 8.1. Bidders are required to submit with their bid package detailed descriptions of the following performance criteria:
 - A. Provide information to support the consistent quality of your firm's lining and other relevant services, along with your ability to meet schedule deadlines, operate with minimum disruption to the surrounding environment, and adherence to a budget;

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- B. Describe your firm's past relationships with the County and/or other customers, which shall include your emphasis on teamwork, communication, cooperation, good and service quality, and reputation.

9. QUALIFICATION CRITERIA – PROJECT MANAGEMENT ABILITY:

- 9.1. Bidders are required to describe their plan to manage the contract. Explain how your firm would staff and operate the project in your description. Present your project management and staffing procedures in the order below:
- A. Provide an organizational chart stating job titles, responsibilities, and number of years of experience for each person. Identify the principals, supervisory staff, and project superintendent to be assigned to the contract. Identify a key employee and an alternate throughout the contract period – one of the contacts shall be on-call at all times. Bidders must also include the procedures that will allow key personnel to be reached by the County prior to and after contract award. In addition, bidders shall submit resumes for all individuals identified above with their bid.
 - B. Bidders must provide a schedule describing the efforts of personnel and equipment for lining.
 - C. Required attachments, completed Professional Engineer Certification Form and Superintendent's Experience Record form for projects that were actively supervised.
 - D. Describe the proposed interface of your firm's staff with the County, including communication procedures with the County and the public.
 - E. Provide a detailed description your firm's customer service/public relations program. The information should include policies and procedures from management to frontline crews, including sub-contractors. In addition, please include examples of written correspondence to citizens, information distributed at public meetings, and all training literature provided to the firm's employees. The Contractor must possess communication skills that will allow for the dissemination written notices, whether hand delivered or mailed, to those households adversely affected by the rehabilitation process.
 - F. Quality Control Procedures. Describe your firm's process for ensuring quality. State how a plan will be developed for work performed for the County. Describe any quality problems your firm has documented within the past five (5) years. Provide documentation for CIPP rehabilitation and or storm sewer projects that were completed in the past five (5) years. This documentation must show that projects have been completed on time and within budget, along with all documented change orders with the percentages of the original value of the work.
 - G. List the firm's safety procedures, which must comply with all applicable United States Department of Labor - Occupational Safety & Health Administration's (OSHA) safety regulations.
 - H. The Contractor shall be fully responsible for arrangements of lodging accommodations and meals for any citizens displaced by the CIPP or Manhole rehabilitation process in the County of Fairfax, Virginia.

SPECIAL PROVISIONS10. QUALIFICATION CRITERIA – MATERIALS, PROCEDURES, AND EQUIPMENT:

10.1. Provide a general description of the materials, and procedures being proposed for use in the CIPP rehabilitation process, attach to Qualification Form, Appendix C.

- Type and properties of lining material and resins
- Description of inspection, cleaning, installation, lateral reinstatement, and quality control procedures.
- Public notification procedures
- Range of pipe diameters that can be rehabilitated with this process.
- Maximum length between access points.
- Methods for maintaining flows.
- Proposed corrective methods for installation problems:
 - incomplete curing
 - non-uniform installation
 - missed service lateral
 - service lateral plugging

10.2. Provide a general description of the materials, and procedures being proposed for use in the Manhole rehabilitation process, attach to Qualification Form, Appendix C.

- Type and properties of materials
- Description of inspection, surface preparation, installation, and quality control procedures.
- Public notification procedures
- Methods for maintaining flows.
- Proposed corrective methods for installation problems:
 - Material failure to meet installation requirement for strength and durability
 - Inadequate thickness
- Terms of liner system manufacturer's warranty

11. STATE REGISTRATION OF CONTRACTOR:

11.1. Bidders must have a "Class A Contractor." (Non-Virginia licenses are not acceptable).

11.2. ***The Code of Virginia does not allow an unlicensed contractor to submit a bid where the resultant contract will require a license. The bidder shall provide a copy of the license and complete the information requested in the Contractor Qualification Form, Appendix C.***

SPECIAL PROVISIONS12. COMPLETION OF BID DOCUMENTS:

12.1. Bidders are cautioned that organization of their bid, as well as thoroughness is critical to the County's evaluation process. The bid cover sheet and submittals must be completed legibly and complete. All required supplemental information must be furnished and presented in an organized, comprehensive, and easy to follow manner. **Failure to comply with all bid requirements will be cause for determining the bidder non-responsive.**

12.2. Contractor Qualification Form: Submit the completed Contractor Qualification Form (Appendix C), and attach any additional documentation required as an Attachment to the bid. Attachments shall be referenced, in the bid, by document and page numbers, to allow for quick reference by the evaluation committee. Bids not providing attachment document and page number references will be considered to have no Attachments. Bid data must be provided in the same sequence as listed in the Qualification Form.

- Related Project Experience

Experience: Describe your firm's past performance and provide information on relevant experience. Complete the Contractor's Experience Record form.

Past Performance: Describe the overall reputation of the bidder and his business operations.

- Key Project Staff and Experience

Project Management Ability: Explain plans to staff and operate the project. The bidder shall include an organizational chart stating job titles, responsibilities and the number of years of experience.

Contractor's Project Superintendent: Describe the Project Superintendent's experience. Include a current resume and complete the Superintendent's Experience Record form.

Professional Engineer Certification: Complete the Professional Engineer Certification form.

- State of Virginia Contractor's License

- Notarized Safety Violations Certificate

- Materials and Procedures

Provide a general description of the materials, procedures and equipment to be used in the rehabilitation process. Provide equipment list and job sample attachment.

- Contact Person

The bidder shall provide a contact person in the event the evaluation committee wishes to obtain clarification on some aspect of the bid submittal.

SPECIAL PROVISIONS13. SUBMISSION OF BIDS:

- 13.1. Each bidder must use the attached Pricing Schedule to submit their bid. Bidder must show the lump sum price, estimated price for wet well structure, contractor's license number, and completion time. **All bidders must return two (2) copies of the Cover Sheet (DPSM30), duly signed, and two (2) copies of Appendix B, keeping all remaining pages for your files.** Bids may be mailed or hand delivered to the following location:

Department of Purchasing & Supply Management
12000 Government Center Parkway, Suite 427
Fairfax, Virginia 22035-0013.

- 13.2. All bids shall be submitted in a sealed envelope or package with the bid number, title, and the bidder's name and address on the outside of such envelope or package.

BIDS RECEIVED AFTER THE DUE DATE/TIME WILL NOT BE CONSIDERED FOR CONTRACT AWARD AND WILL BE RETURNED TO THE BIDDER.

- 13.3. Bidders are reminded that changes to the bid, in the form of addenda, are often issued between the issue date and within three (3) days before the due date. All addenda **MUST** be signed and submitted to the Department of Purchasing and Supply Management, 12000 Government Center Parkway, Suite 427, Fairfax, VA 22035 as instructed on the addenda. Notice of addenda will be posted on eVA and the DPSM current solicitation webpage. Bidders are responsible to monitor the web page for the most current addenda at <http://www.fairfaxcounty.gov/solicitation/>.

- 13.4. **Last day to submit questions to be answered and addressed in the addenda is June 11, 2015 at 4:30 p.m. Eastern Time.**

14. BID SECURITY:

- 14.1. Bid security in the amount of five percent (5%) of the bid price is required with each bid in the form of a certified check or bid bond made payable to County of Fairfax, Virginia. Checks will be returned to all bidders within sixty (60) days after the date of the formal opening of the bids. The bid security must clearly make reference to this solicitation number and title. Bid bonds shall be issued by a surety company licensed and authorized to conduct business in the State of Virginia.

15. ALTERNATIVE FORMS OF BID SECURITY:

- 15.1. In lieu of a bid, payment or performance bond a bidder may furnish a certified check cashier's check or cash escrow in the face amount required for the bond.
- 15.2. If approved by the County Attorney, a bidder may furnish a personal bond, property bond, or bank or savings institution's letter of credit on certain designated funds in the face amount required for the bid, payment or performance bond. Approval shall be granted only upon a determination that the alternative form of security proffered affords protection to the County equivalent to a corporate surety's bond.
- 15.3. The County may, at the discretion of the County Purchasing Agent, require bid, payment or performance bonds for contracts for goods or services if provided in the Invitation to Bid or Request for Proposal.

SPECIAL PROVISIONS16. CONTACT FOR ADMINISTRATION:

- 16.1. In the event a contract is executed with your firm as a result of this solicitation, indicate the person(s) that may be contacted for prompt contract administration in the space provided on the Appendix B-1.

17. WITHDRAWAL OF BID:

- 17.1. A bidder for a public construction contract, other than a contract for construction or maintenance of public highways, may withdraw their bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder shall give notice in writing of their claim of right to withdraw their bid within two (2) business days after the conclusion of the bid opening procedure.

18. BID EVALUATION/CONTRACT AWARD:

- 18.1. Bids will be evaluated on the basis of a firm fixed price, and award will be made to the lowest responsive and responsible bidder complying with all provisions of the invitation for Bid.
- 18.2. Paragraph 24, "Award or Rejection of Bids" of the General Conditions and Instructions to Bidders is amended to add: "Unless cancelled or rejected, a responsive bid from the lowest responsive and responsible bidder shall be accepted as submitted, except that if a bid from the lowest responsive and responsible bidder exceeds available funds, the County may negotiate with the apparent low responsive and responsible bidder to obtain a contract price within available funds."
- 18.3. Negotiation may be undertaken when there is insufficient time to readvertise with a modified specification and/or there are no clearly definable elements of the specifications which can be removed to permit a readvertisement or it is otherwise in the best interest of Fairfax County to negotiate.
- 18.4. If negotiation is undertaken, the County may negotiate changes in the solicitation with the lowest responsive and responsible bidder to obtain a satisfactory price within available funds. If a satisfactory price cannot be agreed to, then the negotiation shall be terminated and the solicitation cancelled.

19. CONTRACT INSURANCE PROVISIONS:

- 19.1. The Contractor shall not commence work on the site until he/she has obtained all insurance required under this article nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until all similar insurance required of the subcontractor has been obtained. The Contractor shall agree to furnish certificates of such coverage if requested by the County Purchasing Agent.

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- 19.2. The Contractor shall be responsible for its work and every part thereof, and for all materials, tools, equipment, appliances, and property of any and all description used in connection therewith. The Contractor assumes all risks of direct and indirect damage or injury to the property or persons used or employed on or in connection with the work contracted for, and of all damage or injury to any person or property wherever located, resulting from any action, omission, commission or operation under the Contract.
- 19.3. The Contractor shall, during the continuance of all work under the Contract provide the following:
- a. Maintain statutory Worker's Compensation and Employers' Liability insurance in limits of not less than \$100,000 to protect the contractor from any liability or damages for any injuries (including death and disability) to any and all of its employees, including any and all liability or damage which may arise by virtue of any statute or law in force within the Commonwealth of Virginia.
 - b. The Contractor agrees to maintain Commercial General Liability insurance in the amount of \$1,000,000 per aggregate/occurrence, to protect the Contractor, its subcontractors, and the interest of the County, its officers and employees, against any and all injuries to third parties, including bodily injury and personal injury, wherever located, resulting from any action or operation under the Contract or in connection with the contracted work. The General Liability insurance shall also include the Broad Form General Liability endorsement, in addition to coverages for explosion, collapse, and underground hazards, where required.
 - c. The Contractor agrees to maintain, owned, non-owned, and hired Automobile Liability insurance, in the amount of \$1,000,000 per aggregate/occurrence, including property damage, covering all owned, non-owned, borrowed, leased, or rented vehicles operated by the Contractor. In addition, all mobile equipment used by the Contractor in connection with the contracted work, will be insured under either a standard Automobile Liability policy, or a Comprehensive General Liability policy. The Garage Keeper's Liability coverage shall also be maintained where appropriate.
 - d. Builder's Risk Policy: The Contractor shall provide Builder's Risk and Fire and Extended Coverage insurance to protect the County and Contractor and subcontractors against loss caused by the perils insured in the amount of 100% of the insurable value of the contract. Such insurance value shall reflect any increases to the contract amount through change orders. Policy to be in Builder's Risk Completed Value forms, including the following:
 1. Policies shall be written to include the names of contractors and County and the words "as their interest may appear";
 2. all insurance shall be in effect on or before the date when construction work is to commence; and
 3. all insurance shall be maintained in full force and effect until the final acceptance of the project by the County.
 - e. Liability insurance may be arranged by General Liability and Automobile Liability policies for the full limits required, or by a combination of underlying Liability policies for lesser limits with the remaining limits provided by an Excess or Umbrella Liability policy.

SPECIAL PROVISIONS

- f. The contractor agrees to maintain Environmental Impairment Liability including sudden and accidental pollution and in transit coverage as well as coverage for storage at site.
- g. Liability Insurance "Claims Made" basis:

If the liability insurance purchased by the contractor has been issued on a "claims made" basis, the contractor must comply with the following additional conditions. The limits of liability and the extensions to be included as described previously in these provisions, remain the same. The contractor must either:

 - 1. Agree to provide certificates of insurance evidencing the above coverage for a period of two years after final payment for the contract. This certificate shall evidence a "retroactive date" no later than the beginning of the contractor's or sub-contractor's work under this contract, or a copy of the endorsement itself.
 - 2. Purchase the extended reporting period endorsement for the policy or policies in force during the term of this contract and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself.
- h. The Contractor shall purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the County, the contractor and subcontractors.
- i. Rating Requirements:
 - 1. The Contractor agrees to provide insurance issued by companies admitted within the Commonwealth of Virginia, with the Best's Key Rating of at least A:VI.
 - 2. European markets including those based in London, and the domestic surplus lines markets that operate on a non-admitted basis are exempt from this requirement provided that the contractor's broker can provide financial data to establish that a market's policy holder surpluses are equal to or exceed the surpluses that correspond to Best's A:VI Rating or better.
- j. Hold-harmless and Indemnification: Article 63 of the General Conditions and Instructions to Bidders shall apply.
- k. The Contractor will provide an original, signed Certificate of Insurance and such endorsements as prescribed herein.
- l. The Contractor will secure and maintain all insurance certificates of its subcontractors that shall be made available to the County on demand.
- m. The Contractor will provide on demand certified copies of all insurance coverage related to the Contract within ten business days of demand by the County. These certified copies will be sent to the County from the Contractor's insurance agent or representative.

SPECIAL PROVISIONS

- 19.4. No change, cancellation, or non-renewal shall be made in any insurance coverage without a 30-day written notice to the County. The Contractor shall furnish a new certificate prior to any change or cancellation date. The failure of the Contractor to deliver a new and valid certificate will result in suspension of all payments until the new certificate is furnished.
- 19.5. Compliance by the Contractor and all subcontractors with the foregoing requirements as to carrying insurance shall not relieve the contractor and all subcontractors of the liability provisions of the Contract.
- 19.6. Contractual and other Liability insurance provided under this Contract shall not contain a supervision, inspection or engineering services exclusion that would preclude the County from supervising and/or inspecting the project as to the end result. The Contractor shall assume all on-the-job responsibilities as to the control of persons directly employed by it and of the subcontractors.
- 19.7. Nothing contained in the specifications shall be construed as creating any contractual relationship between any subcontractor and the County. The Contractor shall be as fully responsible to the County for the acts and omissions of the subcontractors and of persons employed by them as it is for acts and omissions of persons directly employed by it.
- 19.8. Precaution shall be exercised at all times for the protection of persons (including employees) and property.
- 19.9. The Contractor and all subcontractors and sub-subcontractors are to comply with the Occupational Safety and Health Act of 1970, Public Law 91-956, as it may apply to this Contract.
- 19.10. Any loss insured under subparagraph "16.3d" is to be adjusted with the County and made payable to the County as trustee for the requirements of any applicable mortgagee clause. The contractor shall pay each subcontractor a just share of any insurance monies received by the contractor, and by appropriate agreement, written where legally required for validity, shall require each subcontractor to make payments to his/her sub-subcontractors in similar manner.
- 19.11. When the County finds it necessary to occupy or use a portion or portions of the work prior to substantial completion thereof, such occupancy shall commence with a mutual agreement between the County and contractor. The insurance company or companies providing the property insurance recognize this contingency and shall provide evidence of such endorsement prior to commencement of work. This insurance shall not be canceled or lapsed for the unoccupied part of the building on account of such partial occupancy. Consent of the contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.
- 19.12. The County, its officers and employees shall be named as an "additional insured" and "loss payee" on the Automobile and General Liability policies and it shall be stated on the Insurance Certificate that this coverage "is primary to all other coverage the County may possess."
- 19.13. A Fairfax County contract number must be provided on the certificate.

SPECIAL PROVISIONS20. BONDS:

- 20.1. The contractor shall furnish, within twenty (20) calendar days after execution of the contract, the following bonds, issued by a surety company licensed and authorized to conduct business in the State of Virginia, made payable to the County of Fairfax. All bonds must clearly make reference to this solicitation number and title.
- a. Performance Bond in the amount equal to one hundred percent (100%) of the contract price on AIA Document A312-2010 or approved equivalent.
 - b. Labor and Materials Payment Bond in an amount equal to one hundred percent (100%) of the contract price on AIA A312-2010 or approved equivalent.
- 20.2. Failure to provide the required bonds, within twenty (20) calendar days, will constitute a material breach of the contract, for which the County may terminate the contract for cause.

21. ADDITIONAL OR SUBSTITUTE BOND:

- 21.1. If the Owner becomes dissatisfied with any surety or sureties then upon the Performance Bond, or if for any other reason, each Bond shall cease to be adequate security to the Owner, the Contractor shall substitute an acceptable bond in such form and sum and signed by such other sureties as may be satisfactory to the Owner within five (5) days after notice. The premiums on such bond shall be paid by the Contractor. No further payment shall be deemed due nor shall be made until the new sureties shall have qualified.

22. PURCHASE ORDER:

- 22.1. A purchase order for the service listed in this Invitation for Bid will be enclosed with the resulting contract or will be issued shortly thereafter and will become an integral part of the resulting contract. The purchase order indicates that sufficient funds have been obligated as required by Title 15.2-1238 of the Code of the Commonwealth of Virginia and assures distribution of the necessary receiving reports.
- 22.2. The purchase order does not supersede any provisions of the Acceptance Agreement. Performance time and dates are determined solely by the contract, and any modification thereto.
- 22.3. Services/supplies are not to begin until receipt of the purchase order or other notification by the County Purchasing Agent to proceed.
- 22.4. The Department of Purchasing and Supply Management has the capability to issue purchase orders electronically and transmit them to vendors by fax. For more information about the Fax Purchase Order program, call (703) 324-3268, TTY 711.

23. CONSTRUCTION SCHEDULE AND SCHEDULE OF VALUES:

- 23.1. Within two weeks after being selected as the contractor for the project, the General Contractor shall provide a complete estimated construction progress schedule depicting time and efforts of all trades involved in the work. This shall be submitted for approval by the Owner's representative for contract coordination. Updated construction progress schedule will be provided within 14 calendar days upon the request of the County.
- Note: The County may withhold payments being made to the Contractor for failure to provide an updated schedule.**

SPECIAL PROVISIONS

- 23.2. Prior to the first application for payment, submit a proposed schedule of values to the owner's representative for contract coordination. The schedule of values should accurately reflect the cost of each activity as represented on the construction schedule (ref: Special Provisions, paragraph 23.1) and the sum of the increments shall total the contract price.

24. CORRESPONDENCE:

- 24.1. All communications between the parties relating to details, progress and coordination of the work shall be through the County Project Manager and shall be deemed binding only when in writing.

25. PERMITS AND LICENSES:

- 25.1. The Contractor is responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State, and municipal laws, codes, and regulations, in connection with the prosecution of the work without additional expense to the County. The Contractor is similarly responsible for all damages to persons or property that occurs as a result of their fault or negligence. The Contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor is also responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction previously accepted.

26. IDENTIFICATION AND BACKGROUND CHECK:

- 26.1. Due to enhanced security measures, Contractor employees, representatives and sub-contractors are required to display company photo identification badges above the waist at all times while on the job site, supplied by the contractor. Contractor employees, representatives and sub-contractors who arrive at the job site without appropriate identification badges may immediately be dismissed from the job site.
- 26.2. The selected Contractor, and it's sub-contractors, will be required to submit written documentation of an acceptable "Criminal History" background check, that is not older than six (6) months, for all employees, representatives, and sub-contractor's prior to receiving any "Notice to Proceed" under this contract, and at any time deemed necessary by the Fairfax County Police Department or Sheriff's Office. If any employee leaves and is rehired by the Contractor a new "Criminal History" must be obtained prior to the employee starting work in Fairfax County. Criminal History must be renewed yearly from the date of first clearance. The Contractor will include this cost in overhead and the County shall not be charged as an additional cost.

Note: For security reasons, Criminal History information must be sent via hardcopy or CD/Disc by certified mail to: Director, Wastewater Collection Division, 6000 Freds Oak Road, Burke, VA 22015.

After review of Criminal History, the County will decide who can work on the job site.

SPECIAL PROVISIONS27. REPRESENTATIONS OF CONTRACTOR:

27.1. The Contractor represents and warrants:

- a. The firm is financially solvent and that manager is experienced in and competent to perform the type of work, or to furnish the plans, materials, supplies or equipment to be so performed or furnished; and
- b. that contractor is familiar with all Federal, State, municipal and department laws, ordinances and regulations, which may in any way affect the work of those employed, including but not limited to any special acts relating to the work or to the project of which it is a part; and
- c. that such temporary and permanent work required by the Contract Documents as is to be done by the contractor can be satisfactorily constructed and used for the purpose of which it is intended and that such construction will not injure any person, or damage any property; and
- d. that contractor has carefully examined the plans, the specifications and the site of the work and that from the contractor's own investigations, he/she has satisfied themselves as to the nature and location of the work, the character, quality, quantity of surface and subsurface materials likely to be encountered, and character of equipment and other facilities needed for the performance of the work, the general and local conditions and all other materials which may in any way affect the work or its performance.

28. SUPERINTENDENCE BY CONTRACTOR:

- 28.1. At the work site at all time, the Contractor shall have a full time construction superintendent who shall have full authority to act for the Contractor. It is understood that the representative shall be acceptable to the County Project Manager and shall be one who can be continued in that capacity for the particular job involved, unless he/she ceases to be on the Contractor's payroll.
- 28.2. Superintendent must be able to communicate in English by both speaking and writing.
- 28.3. The Contractor will provide written notification to the County Project Manager 2 week in advance prior to the superintendent being changed or replaced. The acceptance of the change or replacement of the superintendent must first be approved by the County Project Manager before the Contractor can change or replace their superintendent. The County Project Manager has the right to make sure that the superintendent provided by the Contractor is qualified and may request documentation for verification.

29. POWER OF CONTRACTOR TO ACT IN EMERGENCY:

- 29.1. In case of an emergency that threatens loss or injury of property and/ or safety of life, the Contractor is permitted to act without previous instructions from the County Project Manager as deemed appropriate. The contract must notify the County Project Manager immediately after of any actions taken.
- 29.2. The County Project Manager shall approve any compensation claimed by the Contractor due to such extra work.

SPECIAL PROVISIONS

- 29.3. Where the Contractor has not taken action but has notified the County Project Manager of an emergency threatening injury to persons or damage to the work, or any adjoining property, upon authorization from the County Project Manager to prevent such threatened injury or damage, the County Project Manager shall direct the contractor's actions. The amount of reimbursement claimed by the Contractor on account of any such action shall be determined in the manner provided in Paragraph 39 hereof for the determination of compensation to be paid for extra work.
30. PROTECTION OF WORK AND PROPERTY:
- 30.1. The contractor shall protect the Owner's property from injury or losses in connection with this contract at all times. The contractor's own work and that of adjacent property (as provided by law and the contract documents) from damage shall be guarded. The contractor shall replace or make good any such damage, loss or injury unless caused directly by errors contained in the contract documents or by the Owner or by his/her duly authorized representatives. All passageways, guard fences, lights and other facilities required for protection by local authorities or local conditions must be provided and maintained.
31. STORAGE OF MATERIALS:
- 31.1. Materials shall be stored so as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other hard clean surfaces and not on the ground and shall be placed under cover when directed. Stored materials shall be located so as to facilitate proper inspection. Equipment that is delivered crated shall remain crated until ready for installation. Lawns, grass plots or other private property shall not be used for storage purposes without the written permission of the Owner or lessee.
32. STANDARD PRODUCTS:
- 32.1. All materials, supplies, and articles furnished shall be the standard products of recognized, reputable manufacturers, as specified and otherwise practicable. The standard products of manufacturers other than those specified, will be accepted when it is proved to be the satisfaction of the County Project Manager that they are equal in strength, durability, usefulness and convenience for the purpose intended. Any changes required in the detail and dimensions indicated on the drawings, for the substitution of standard products other than those provided for, shall be made as approved by the County Project Manager and at the expense of the contractor.
33. ALL WORK SUBJECT TO CONTROL OF COUNTY PROJECT MANAGER:
- 33.1. In the performance of the work, the Contractor shall abide by all orders, directions and requirements of the County Project Manager and shall perform all work to the satisfaction of the County Project Manager and at such times and places, by such methods and in such manner and sequence as he may require. The County Project Manager shall determine the amount, quality, acceptability and fitness of all parts of the work, shall interpret the plans, specifications, Contract Documents, and any extra work orders and shall decide all other questions in connection with the work. The Contractor shall employ no plans, equipment, materials, methods or persons to which the County objects and shall remove no plant, materials, equipment or other facilities from the site of the work without the County Project Manager's permission. The County Project Manager shall confirm in writing, any oral order, direction, requirement or determination.

SPECIAL PROVISIONS34. COUNTY PROJECT MANAGER'S CONTROL NOT LIMITED:

34.1. The County's Project Manager will control the work under the contract. The contractor must perform all the work to the complete satisfaction of the Project Manager. Examples given or statements made in the Special Provisions and the Contract Documents pertaining to the method of work performance are examples, only. Bidders should not assume that the Project Manager's direction is limited to those items only, but applies to all work performed under the contract.

35. INCOMPETENT OR DISORDERLY EMPLOYEES:

35.1. If any person employed on the work by the Contractor shall appear to the County Project Manager to be incompetent or to act in a disorderly or improper manner, such person shall be removed immediately on the requisition of the County Project Manager, and shall not again be reemployed (on subject project) except on written consent of the County Project Manager

36. WORKMANSHIP:

36.1. Only first-class work shall be performed and all materials furnished in carrying out this contract and shall be of character and quality required by the specifications. Such work or materials shall be the best of their respective kinds, where no standard is specified. Any unsatisfactory work done or materials furnished shall be immediately removed and satisfactorily replaced by the contractor when notified to do so by the County Project Manager at whatever time the inferior work or materials may be discovered.

36.2. If the contractor neglects or refuses to remove such unsatisfactory work or materials within forty-eight hours after the receipt of notice, or if satisfactory progress is not made in doing so, the County Project Manager may effect removal of the inferior work or materials and the expense shall be charged to the contractor. Such expense shall be deducted from any monies due or to become due the contractor under the contract. Upon completion of the contract the entire work shall be delivered to the Owner perfect and complete in satisfactory working condition.

36.3. The contractor expressly undertakes at his own expense:

- a. to effect all cutting, fitting or patching of his work required to make same conform to the plans and specifications and except with consent of the County Project Manager not to cut or otherwise alter the work of any other contractor, and
- b. to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.

37. CHANGES AND ALTERATIONS:

37.1. The Owner reserves the right to make alterations in the installation of items of work shown on the specifications, as may be necessitated by conditions found during construction that in the judgment of the County Project Manager appear advisable. The Contractor shall not claim forfeiture of contract by reasons of such changes by the Owner's County Project Manager.

SPECIAL PROVISIONS38. NECESSARY DETAILS NOT SPECIFICALLY MENTIONED:

- 38.1. The Contractor if designated shall furnish all required work or material which is not denoted in the specifications either directly or indirectly, but which is necessary for project.

39. EXTRA WORK:

- 39.1. The Owner may require the performance of extra work and/or changes as necessary or desirable, at any time, by a written order and without notice to the sureties.
- 39.2. The amount of compensation to be paid to the Contractor for any extra work shall be determined by unit prices, or by a lump sum mutually agreed upon by the Owner and the Contractor.
- 39.3. A change proposed must be submitted within ten (10) days from the request for a proposal to change, add or delete work.
- 39.4. The Contractor's proposal shall be on a lump sum basis and shall be itemized and segregated by labor, materials and equipment for the various components of the change in the work (no aggregate labor total will be acceptable) and shall be accompanied by signed proposals of any subcontractors who will perform any portion of the change in the work and of any persons who will furnish materials or equipment for incorporation therein.
- 39.5. The portion of the proposal relating to labor, whether by the Contractor's forces or the forces of any of its subcontractors, may include reasonable anticipated gross wages of job site labor including foremen, who will be directly involved in the change in the work (for such time as they will be so involved), plus payroll costs (including premium costs of overtime labor, if overtime is authorized, Social Security, Federal or State unemployment insurance taxes and fringe benefits required by collective bargaining agreements entered into by the Contractor or any such subcontractor in connection with such labor).
- 39.6. The portion of the proposal relating to material may include the reasonable anticipated costs to the Contractor or to any of its Sub-contractors of materials to be purchased for incorporation in the change in work, plus transportation and applicable sales or use taxes.
- 39.7. The proposal may further include the Contractor's and any of his/her subcontractor's reasonable anticipated rental costs, except small hand tools with a purchase value of less than \$1,000.00, in connection with the change in the work (either actual rates or discounted local published rates).
- 39.8. Base cost is defined as the total of labor, material and rental in the original contract. The actual net cost in money to the Owner for the change in the work shall be computed as follows:
- a. If the Contractor performs the change in the work, his/her compensation will be the Base Costs as described above, plus a maximum mark-up of fifteen percent (15%) of the base cost for overhead and profit.
 - b. If the work is performed by a bona fide subcontractor, his/her compensation will be the base costs as herein described plus a maximum mark-up of fifteen percent (15%) of the base cost for overhead and profit. The Contractor's compensation will be a maximum mark-up of five percent (5%) of the subcontractor's base cost for his/her overhead and profit.

SPECIAL PROVISIONS

- c. If the work is performed by a bona fide sub-subcontractor, his/her compensation will be the base costs as herein described plus a maximum mark-up of fifteen percent (15%) for overhead and profit. The subcontractor's compensation will be a maximum mark-up of five percent (5%) of the sub-subcontractor's base cost for his/her overhead and profit. The Contractor's compensation will be a maximum mark-up of five percent (5%) of the sub-subcontractor's base cost for his/her overhead and profit.
- d. The fifteen percent (15%) mark-up on the cost of labor and materials described above shall compensate the Contractor or subcontractor or sub-subcontractor for all indirect costs associated with or relating to the change of the work including, but not limited to, gross receipts tax, superintendence, small tools valued over \$1,000.00, reproduction, administration, insurance, bonds, safety, temporary structures and offices, all other general and administrative, home office and field office expenses and profit.
- e. The five percent (5%) mark-up on the cost of labor and materials described above shall compensate the Contractor or subcontractor for all indirect costs associated with or relating to the change in the work including but not limited to, gross receipt tax, superintendence, reproduction, administration, insurance bonds.
- f. In the event that it is necessary to increase the contract time in order to perform the change in the work, the Contractor shall provide an estimate of the increase in the contract time, which shall be negotiated by the parties to the contract.
- g. If the Contractor's proposed change is rejected by the Owner as being with in the scope of the work required by the contract documents the Owner may, at its sole option and discretion, direct the Contractor to perform the work which is the subject of the said proposed change; the Contractor shall then promptly proceed with said work. Nothing shall excuse the timely performance by the Contractor of the work because any proposed change is pending.

39.9. These provisions shall not affect the power of the Contractor to act in case of an emergency.

40. DECREASES IN WORK UNDER LUMP SUM ITEMS:

- 40.1. The Owner or County Project Manager may, at any time, decrease in dimension, quantity of material or work, or alter the situation or levels, or vary the form of dimensions of any part of the work or alter the project in any way. Such changes shall be made in writing in accordance with the contract and the difference in expense resulting from the decrease or change ordered shall be deducted from the amount payable under this contract. If the incremental cost of the decrease is not identified in the project schedule, the County Project Manager shall determine the amount of deduction based on a proper, fair and reasonable allowance for the lesser amount of materials and labor required. If necessary in order to establish such fair allowance, the contractor may be required to submit a detailed breakdown of his/her original bid for the items of work involved. Alterations or changes that diminish the quantity of work to be done shall not constitute a claim for damages or for loss of anticipated profits in the work.

41. WEATHER CONDITIONS:

- 41.1. In the event of temporary suspension of work or during inclement weather, or whenever the County Project Manager shall direct, the Contractor will require any subcontractors to protect carefully all materials and work against damage or injury from the weather. If, in the opinion of the County Project Manager, any work or materials have been damaged or injured by reason of failure on the part of the Contractor or any subcontractors to protect his/her work and materials shall be removed and replaced at the expense of the Contractor.

SPECIAL PROVISIONS42. EXTENSION OF TIME: NO WAIVER:

- 42.1. If the Contractor is delayed in the completion of his/her work by reason of unforeseeable causes beyond his/her control and without his/her fault of negligence, including but not restricted to acts of God or the public enemy; acts of neglect to the Owner, acts or neglect of any other Contractor, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotion, or freight embargoes, the period specified for the completion of his/her work shall be extended by such time as shall be fixed by the Owner.
- 42.2. No such extension of time shall be deemed a waiver by the Owner or his right to terminate the contract for abandonment or delay by the Contractor as herein provided to relieve the Contractor from full responsibility for performance of his/her obligations hereunder.
- 42.3. Paragraph 49 of the General Conditions is amended to read, "DELAY - Should the contractor be delayed by the County, there shall be added to the time of completion a time equal to the period of such delay caused by the County. Claims for damages or extra compensation shall be limited to direct costs attributed to the delay."
- a. A Contractor making a claim against the County for costs or damages due to the alleged delaying of the Contractor in the performance of its work under any County Construction contract shall be liable to the County and shall pay it for a percentage of all costs incurred by the County in investigating, analyzing, negotiating, litigating and arbitrating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim which is determined through litigation or arbitration to be false or to have no basis in law or in fact.

43. CLEANING UP:

- 43.1. The contractor shall keep the premises and adjacent areas free from accumulations of waste material or rubbish at all times. At the completion of the work, all rubbish, tools, used for work and surplus materials shall be removed from and about the premises and adjacent areas, and the area shall be "broom cleaned" and ready for use. In case of a dispute, Fairfax County may remove rubbish or otherwise clean up, and may charge the Contractor either by deduction from amounts unpaid to the Contractor, or by other means with such cost as the County Project Manager shall determine to be fair and equitable.

44. EXAMINATION OF DEFECTIVE WORK:

- 44.1. If required by the County Project Manager under execution of this contract, the contractor shall at any time pull down or undo any part of the work and make such openings as may be required and enable the County Project Manager to make proper inspection and the contractor shall make good again the work so pulled down, undone or opened to the County's Project Manager satisfaction. If the work is found faulty, in any respect the whole of the expenses incurred shall be incurred by the Contractor, but if the work be found not faulty by the County Project Manager, the expenses thereby incurred shall be incurred by the Owner.

45. REJECTION OF INFERIOR MATERIAL:

- 45.1. An inspection and approval of the materials by the County Project Manager shall not in any way subject the Owner to pay for any portion of the materials, even if said materials, incorporated in the work, turn out to be unfit. Such inspection shall not be considered as any waiver of objection to the work on account of the unsoundness of the material used.

SPECIAL PROVISIONS46. PAYMENTS:

46.1. Payments will be made in accordance with the Technical Specifications and all other Contract Documents of this solicitation.

46.2. Payments to the Contractor will be made as follows:

The Owner will make partial payment to the Contractor on the basis of a duly certified approved estimate of the work performed during the preceding calendar month by the Construction Contractor, not later than the 30 days from receipt by the County of a properly completed invoice. The Owner will retain 5 percent of the amount of each such estimate until final completion and acceptance of all work covered by this contract. Upon filing with the County Project Manager copies of invoices for material, there may be included in the monthly estimates 95% of the value of all materials delivered to the site of the work, which is to enter into actual construction. Each monthly payment request document shall be an original and four copies and shall be submitted to the County Project Manager. The original document shall include original typing and signatures. The four copies shall include original signatures. All five documents shall be notarized. Payment will be made after submittal of an approved pay estimate. The amounts of monthly certifications for payment shall be considered approximate. The Owner reserves the right to withhold monthly payments if work is not proceeding according to contract.

47. OWNER'S RIGHT TO WITHHOLD PAYMENTS:

47.1. The Owner may withhold from the Contractor so much of any approved payments due him as may in the judgment of the Owner be necessary:

- a. To assure the payment of just claims then due and unpaid of any persons supplying labor or materials for the work;
- b. To protect the Owner from loss due to defective work not remedied or;
- c. To protect the Owner from loss due to injury to persons or damage to the work or property of other contractors, subcontractors or others, caused by the act or neglect of the Contractor or of any of his/her subcontractors. The Owner shall have the right as Agent for the Contractor, to apply any such amounts so withheld in such manner as the Owner may deem proper to satisfy such claims or to accrue such protection. Such applications of such money shall be deemed payments for the account of the Contractor.

48. OWNER'S RIGHT TO STOP WORK OR TERMINATE CONTRACT:

48.1. If:

- a. the Contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors; or
- b. a receiver or liquidator shall be appointed for the Contractor or for any of his/her property and shall not be dismissed within 20 days, or after such an appointment, or the proceedings in connection therewith shall not be stayed on appeal within the said 20 days; or
- c. the Contractor shall refuse or fail, after Notice of Warning from the County Project Manager, to supply enough properly skilled workmen or proper materials; or
- d. the Contractor shall refuse or fail to prosecute the work with such diligence as will insure its completion within the period specified (or any duly authorized extension) or shall fail to complete the work within said period; or

SPECIAL PROVISIONS

- e. the Contractor shall fail to make prompt payment to persons supplying labor or materials for the work; or
- f. the Contractor shall fail or refuse to regard laws, ordinances, or the instructions of the County Project Manager, or otherwise be guilty of a substantial violation of any provision of this contract, then and in any such event, the Owner, without prejudice to any other rights or remedy it may have, may by seven (7) days notice to the Contractor, terminate the employment of the Contractor and his/her right to proceed either as to the entire work or (at the option of the Owner) to any portion thereof as to which delay shall have occurred, and may take possession of the work and complete the work by contract or otherwise as the Owner may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the compensation to be paid the Contractor shall exceed the expense of completing the work (including compensation for additional managerial, administrative and inspection services and any damages for delay) such excess shall be paid to the Contractor. If such expenses shall exceed such unpaid balance, the Contractor and his/her sureties shall be liable to the Owner for such excess. If the right of the Contractor to proceed with the work is terminated, the Owner may take possession of and use such materials, appliances, supplies, plans and equipment as may be on the site of the work, and necessary therefore, for completing the work. If the Owner does not so terminate the right of the Contractor to proceed, the Contractor shall continue the work.

49. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE:

- 49.1. The acceptance by the Contractor of the final payment constitutes a release to the Owner of all claims and of all liability to the Contractor for all work or materials furnished in connection with agreement and for every act and neglect of the Owner and others relating to or arising out of this work, excepting the Contractor's claims for interest upon the final payment if this payment is improperly delayed. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance Bond.

50. ERRORS:

- 50.1. The Contractor shall make no claim against the Owner because the estimates, tests or representations of any kind affecting the work made by any officer or agent of the Owner may prove to be erroneous, in any respect.

51. ORDER OF PRECEDENCE:

- 51.1. In the event of conflict, the Acceptance Agreement and the Special Provisions, Technical Specifications of this contract shall take precedence over the General Conditions and Instructions to Bidders, included herein.

52. SUBCONTRACTING:

- 52.1. If one or more subcontractors are required, the contractor is encouraged to utilize small, minority-owned, and women-owned business enterprises. For assistance in finding subcontractors, contact the Virginia Department of Business Assistance <http://www.dba.state.va.us>; the Virginia Department of Minority Business Enterprise <http://www.dmbe.state.va.us>; local chambers of commerce and other business organizations.

SPECIAL PROVISIONS

- 52.2. As part of the contract award, the prime contractor agrees to provide the names and addresses of each subcontractor, that subcontractor's status as defined by Fairfax County, as a small, minority-owned and/or woman-owned business, and the type and dollar value of the subcontracted goods/services provided. Reference Appendix B to this solicitation.

53. NEWS RELEASES BY VENDORS:

- 53.1. As a matter of policy, the County does not endorse the products or services of a contractor. News releases concerning any resultant contract from this solicitation will not be made by a contractor without the prior written approval of the County. All proposed news releases will be routed to the Purchasing Agent for review and approval.

54. AMERICANS WITH DISABILITIES ACT REQUIREMENTS:

- 54.1. Fairfax County is committed to a policy of nondiscrimination in all County programs, services, and activities and will provide reasonable accommodations upon request. Bidders requesting special accommodations should call the Department ADA representative (703) 324-3201 or TTY 1-800-828-1140. Please allow seven (7) working days in advance of the event to make the necessary arrangements.
- 54.2. Fairfax County Government is fully committed to the Americans with Disabilities Act (ADA), which guarantees non-discrimination and equal access for persons with disabilities in employment, public accommodations, transportation, and all County programs, activities and services. Fairfax County government contractors, subcontractors, vendors, and/or suppliers are subject to this ADA policy. All individuals having any County contractual agreement must make the same commitment.

Your acceptance of this contract acknowledges your commitment and compliance with ADA.

55. STATE CORPORATION COMMISSION IDENTIFICATION NUMBER:

- 55.1. Pursuant to *Code of Virginia*, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Any bidder or offeror that fails to provide the required information may not receive an award.

ATTACHMENT 1
TECHNICAL SPECIFICATIONS
PART A
GRAVITY SEWER

TECHNICAL SPECIFICATIONS PART A
GRAVITY SEWER

1. GENERAL:

- 1.1. The Contractor shall be responsible for providing all labor, supervision, materials, equipment, tools, transportation, and supplies required to complete gravity sewer lines in accordance with the terms of this contract. When completed, the liner pipe will extend from one manhole to the next manhole in a continuous watertight length, and all active lateral connections in this length shall be reinstated without exception, and will be free of all forms of restrictions.
- 1.2. The Contractor is expected to have become familiar with and take into consideration, site conditions that may affect the work and to check all dimensions at the site.
- 1.3. The Contractor shall be thoroughly acquainted as to the characteristics and nature of the work to be performed. The Contractor shall examine the work site to become familiar with any difficulty that may be encountered at the site; the facilities for delivering, storing and placing materials and equipment; and/or at any other site relating to construction and labor where conditions may be challenging.
- 1.4. The Contractor shall be responsible for access to the sewer pipes for work to be completed and removal of the materials used to the satisfaction of the County. **Providing 4 Odor Control Vent Valves, stream crossings, temporary roads, construction entrances, sediment controls, permits, traffic control plans, traffic controls, site restoration, public outreach, all testing, CCTV, Cleaning Sewers, bypass pumping and any other items not listed in the Pricing Schedule are incidental to the contract. Costs for these items and all access shall be included in the Lump Sum price in the Pricing Schedule of this solicitation.**
- 1.5. No plea of ignorance of the conditions that exist on the work site or difficulties that may be encountered in the execution of the work, as a result of failure to make necessary investigations and examinations, will be accepted as an excuse for any contractual failure or omission.
- 1.6. The Contractor must employ such methods or means as will not cause interruption of or interference with the public, work of any other Contractor, or County personnel at the site.

2. SCOPE OF WORK:

- 2.1. The work includes, but is not limited to, the following:
 - A. Prior to rehabilitation: sewer line cleaning, closed-circuit television (CCTV) inspection, and video recordings of existing sewers and service connections
 - B. As required and at the direction of the County, completing spot repairs, and sealing active leaks by the Contractor's method for pipeline reconstruction
 - C. Sewage bypassing and maintenance of flow as appropriate for the type of sewer.
 - D. Reconstruction of existing gravity sewers by the CIPP method
 - E. Reinstatement of lateral connections without excavation
 - F. After rehabilitation and reinstatement of lateral connections, CCTV inspection, and video recordings of sewer lines **without** wastewater in the lines
 - G. Performance of acceptance testing

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- H. Provision of a five-year warranty
- I. Maintenance of traffic in accordance with local, state, and federal requirements
- J. Safety requirements in accordance with local, state, and federal requirements
- K. Obtaining all necessary permits and providing copy to the County.
- L. Notification of Homeowners or Businesses
- M. Attending progress meetings and providing progress photos for the duration of the project, prior to the start of work to final clean-up and completion.
- N. All restoration including roadway restoration in accordance with VDOT Specifications.
- O. Providing all submittals at no cost to the County

3. INFORMATION TO BE PROVIDED BY THE COUNTY:

- 3.1. The County will provide the Contractor:
 - A. A written or electronic report summarizing CCTV inspection results and identifying sewer defects.
 - B. Highlighted grid maps and/or geographic information system (GIS) map information of the County's sewer lines to be done. Bidders may refer to the following link for printable county maps: <http://www.fairfaxcounty.gov/gis/DMV/Default.aspx>

4. REFERENCE SPECIFICATIONS:

- 4.1. Revisions to any the references below (ref. Technical Specifications PART A Gravity Sewer Paragraph. 4.2. A. - J., 4.3. thru 4.8) prior to the time of the bid opening shall apply.
- 4.2. American Society for Testing and Materials (ASTM) (<http://www.astm.org>.)
 - A. ASTM D-638: Test Method for Tensile Properties of Plastics
 - B. ASTM D-790: Test Method for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials
 - C. ASTM F-1216: Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube (Ref. ASTM F-1216-05)
 - D. ASTM C-581: Standard Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-reinforced Structures Intended for Liquid Service
 - E. ASTM D-3681: Standard Test Method for Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe in a Deflected Condition (for sanitary sewer CIPP)

TECHNICAL SPECIFICATIONS PART A
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- F. ASTM F-2019-11: Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP), as applicable
 - G. ASTM D-3567: Standard practice for Determining Dimensions of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings, as applicable
 - H. DIN EN 761: Plastics piping system-Glass-reinforced thermosetting plastics (GRP) pipes-Determination of the creep factor under dry conditions, as applicable.
 - I. ASTM D-2990: Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
 - J. ASTM D698 – Test Methods for Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5 lb. Hammer and 12-inch Drop.
- 4.3. Fairfax County Public Facilities Manual.
- <http://www.fairfaxcounty.gov/dpwes/publications/pfm/> and
(<http://www.municode.com>) – Chapter # 104 Erosion and Sedimentation Control
- 4.4. Virginia Department of Transportation (<http://www.virginiadot.org/>)
- A. Land Use permit Manual
 - B. Road and Bridge Specifications
- 4.5. Manual of Accident Prevention in Construction, Associated General Contractors of America (Fairfax Water reference) <http://store.agc.org/Safety/General-Safety/0101>
- 4.6. Virginia Storm Water Management Program
<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>
- 4.7. Virginia Department of Conservation and Recreation
(<http://www.dcr.virginia.gov>)
- 4.8. The Chesapeake Bay Preservation Ordinance and Amendments
(<http://www.municode.com>) – Chapter # 118 The Chesapeake Bay preservation Ordinance and Amendments
5. SUBMITTALS: (Requires electronic submittals such as, emails or CD's)
- 5.1. A copy of the weekly work schedule submitted in Excel two working days in advance. Schedule to contain:
 - A. Company Name
 - B. Contact information for crew and superintendent
 - C. Dates and name for each day
 - D. Street names where work will take place
 - E. Manhole Numbers, County Grids and coordinates
 - F. Liner size and thickness
 - G. Liner length and number of sewer house connections (Taps) for each sewer segment lined
 - H. Comments/Description of work

TECHNICAL SPECIFICATIONS PART A
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Failure to comply with this requirement and/or provide public notification in accordance with the contract may result in the issuance of a work stoppage; see Special Provision 48 - **RIGHT TO STOP WORK OR TERMINATE CONTRACT.** With each weekly work schedule, submit design data and specifications data sheets listing all parameters used in the CIPP material design and thickness calculations based on Appendix X1 of ASTM F-1216. Submit the completed Professional Engineer Certification form included in the bid documents for all CIPP design data.

- 5.2. Certified test reports to demonstrate compliance of the proposed CIPP material with the specified ASTM standards.
- A. Certified copies of all test reports on the properties of the selected resin, fiber tube, and later, on the liner coupons performed by, and/or for the Contractor, shall be submitted to Fairfax County. Examples are the manufacturer's resin data test results and the infrared spectrum analysis of the resin. Results of additional product testing(s), normally performed for "in-house quality control" and process improvement, shall also be provided to the County, at no cost to the County. The Contractor shall provide Fairfax County in writing, the name and designation of all in-house quality control test(s) and the sampling frequency of the tests on the resin and liner materials. Fairfax County shall also have the right to require the testing to be done at designated liner location(s) within the scope of the Contract.
 - B. The Contractor shall insure that all samples for testing are labeled prior to shipment. The County may also inspect and/or request testing by an independent laboratory at no additional cost to the Contractor.
 - C. The Contractor will provide confirmation testing for each liner inversion to confirm tensile strength, flexural strength, modulus of elasticity, thickness and other requirements of the ASTM standards and the specifications are met.
- 5.3. Manufacturer's storage and handling instructions for the liner tube and resins.
- 5.4. Contractors utilizing processes with a fiberglass felt composite shall perform and submit an additional strain corrosion test as set forth in ASTM D-3681.
- 5.5. Installation, heating, curing, and cool-down schedule plan for each section. Copies of the "wet out" and "cure" reports in an approved format shall be submitted to Fairfax County immediately after the certified curing schedule is completed. The reports shall be attached to the Contractor's daily report. It shall be incumbent upon the Contractor to adhere to the resin manufacturer's data criteria, guidelines, and recommendations. A copy of the resin manufacturer's data shall be submitted to the County. Any variance in the guidelines or recommendations after the contract date shall require Fairfax County's written approval prior to implementing any such variances.
- 5.6. Information on seals and grouts.
- 5.7. Sample Resident Notification Letter for residents, for approval by the County.
- 5.8. Records and DVD's documenting line cleaning and television inspection work.
- 5.9. A description of methods for avoiding liner stoppage during installation and plans for protecting existing sewers including downstream sewers that have previously been lined.
- 5.10. Actual resin volume used, and test results of infrared spectrum analyses conducted on each lot of resin.

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- 5.11. Product specifications for lubricant, if necessary.
- 5.12. Notification of suspected inactive service connections.
- 5.13. Notification of any property damage.
- 5.14. Pre-Construction Video and/or photographs in digital format as approved by the County. Video to document all pre-existing conditions at the site within the limits of construction and all areas impacted by contractor operations. Video to provide means to determine time of recording and location. Video will be submitted and approved prior to the start of any work. Additionally, progress video and/or photographs will be taken during work activities which alter conditions in the field and when the work is complete. Video and/or photographs are to be provided weekly and when directed by the County at no additional costs. They shall include pre-existing damage for reference during restoration operations.
- 5.15. Updated list of Punch List Items.
- 5.16. Documentation of "Criminal History" background check
- 5.17. Written permission from land owners to use privately owned land to store materials and/or equipment.
- 5.18. Copies of all permits obtained by the Contractor.
- 5.19. Detailed sewer by-pass pumping plan in accordance with Sections 16.11 Maintenance of Sewage Flows of the TECHNICAL SPECIFICATIONS PART A
- 5.20. Compaction Test Reports: Submit reports for each location of field compaction test. Reports shall include results of field density tests, moisture content and degree of compaction
- 5.21. Letter to designate the Contractor's representative on-site.
- 5.22. Materials and method to construct stream crossings and temporary roadways to access the work. Construction of these items to meet requirements of the Fairfax County Public Facilities Manual, VDOT and pertinent jurisdictional requirements.

6. QUALITY ASSURANCE:

- 6.1. All CIPP lining materials shall be from a single manufacturer. The manufacturer and Contractor shall be responsible for providing all test requirements specified herein as applicable. In addition, all CIPP materials to be installed under this contract may be inspected at the plant for compliance with specifications by an independent testing laboratory approved by the County. The Contractor shall require the manufacturer's cooperation in these inspections.
- 6.2. Inspections of CIPP materials may also be made by the County after delivery. The CIPP liner shall be subject to rejection at any time due to failure or unacceptable installation, even in the event that CIPP material is accepted as satisfactory at the place of manufacture. CIPP materials, rejected after delivery, shall be marked for identification and removed from the job immediately after the determination.

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7. DELIVERY, STORAGE AND HANDLING:

- 7.1. Care shall be taken in shipping and handling to avoid damage to CIPP materials. Extra care will be necessary during cold weather construction. Any CIPP materials damaged in shipment or storage shall be replaced as directed by the County.
- 7.2. Any CIPP liner showing a split or tear, which has received a blow causing damage—even though no such damage can be seen—shall be marked as rejected and removed immediately from site.
- 7.3. CIPP materials shall be adequately supported and protected, while stored. CIPP materials shall be stored as recommended by the manufacturer.

8. WARRANTY:

- 8.1. All CIPP lining placed shall be guaranteed by the Contractor and manufacturer for a period of five years from the date of acceptance (defined as final payment). During this period, all defects discovered in the CIPP lining or workmanship, as determined by the County, shall be repaired or removed and replaced in a satisfactory manner at no cost to the County.
- 8.2. All work and parts provided under this contract shall have, as a minimum, a five (5) year warranty from the date of final acceptance thereof against any latent defects, design, materials, workmanship, installation, fraud, or such gross mistakes, as may amount to fraud.
- 8.3. When defective work and/or materials are found during the warranty period, the County's Project Manager shall notify the Contractor, in writing, and the Contractor shall respond within seven (7) calendar days of the notification. Upon receipt of notice from the County of failure of any item, appurtenance thereto, or signs of deterioration during the warranty period, the Contractor shall promptly adjust, repair, or furnish, and install necessary replacement parts of design, workmanship, materials approved by the County at the Contractor's expense.

9. PRODUCTS:

- 9.1. Chemical Resistance as Applicable to Sanitary and Storm water Sewers
 - A. The liner shall be fabricated from materials that will be chemically resistant to withstand internal exposure to sewage and sewage gases containing normal levels of hydrogen sulfide, carbon monoxide, carbon dioxide, methane, traces of mercaptan, and external exposure to soil bacteria when cured.
 - B. The manufacturer shall submit results of chemical resistance testing performed on specimens of the cured in place pipe. Tests shall be performed in accordance with ASTM F-1216, C-581, and D-3681.
 - C. The chemical corrosion resistance of the actual resin system (neat plus modifications) selected by the contractor, shall be tested and submitted by the resin manufacturer in accordance with ASTM C-581. Exposure to the chemical solutions listed in the table below shall result in a loss of not more than 20% of the initial physical properties, when tested in accordance with ASTM C-581 for a period of not less than one year.

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Chemical Solution	Concentration (%)
Tap Water (pH 6-9)	100
Nitric Acid	5
Phosphoric Acid	10
Sulfuric Acid	10
Gasoline	100
Vegetable Oil	100
Detergent	0.1
Soap	0.1

9.2. Samples - Inspection and Testing

- A. At no additional cost to the County, the Contractor will obtain cured samples and test the samples in accordance with appropriate ASTM Standards in order to verify and determine their chemical composition and integrity upon request.
- B. Each lot shall be inspected for defects at the time of resin impregnation. The resin shall not contain fillers, except those required for viscosity control, fire retardant, or to extend the pot life. Thixotropic agents that will not interfere with visual inspection may be added for viscosity control. In addition, the opaqueness of the plastic coating shall not interfere with visual inspection. Resins may contain pigments, dyes, or colors that do not interfere with visual inspection of the cured-in-place liner pipe or its required properties. Additives may be incorporated that enhance physical and chemical resistant features. For testing purposes, each lot shall consist of all the tube and resin on a full, continuous length of impregnated liner.

10. LINER DESIGN:

- 10.1. The Contractor shall determine the recommended liner thickness for each manhole-to-manhole section. Liners shall be designed to withstand internal and/or external pressures in accordance with the applicable provision of ASTM F-1216. Unless otherwise indicated, liner thickness calculations shall be performed based on a fully deteriorated pipe condition. Thickness design calculations shall be prepared and sealed by a Virginia registered Professional Engineer, and shall be based, as a minimum:
 - A. In accordance with ASTM F1216-07B, Appendix X1, Design Considerations for a circular host pipe with 10% ovality or less.
 - B. In accordance with WRc Sewerage Rehabilitation Manual, Type II Design, Section 5.3.2.iii for non-round pipe or circular pipes with greater than 10% ovality.
 - C. A minimum overall safety factor of 2.0.
 - D. A minimum service life of 50 years under continuous service.
 - E. A minimum 50-year flexural modulus of elasticity of 200,000 psi and a minimum 50-year flexural strength of 2,500 psi.
 - F. A modulus of soil reaction of 700 psi.
 - G. A soil density of 120 lbs. /ft³.
 - H. A Poisson's ratio of 0.3.
 - I. An enhancement factor of 7.

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- J. A groundwater elevation over the pipe equivalent to surface grade unless otherwise noted in the Lining Summary attached to each task order, or as shown on the Drawings.
 - K. Ovality for each segment to be lined is noted in the Lining Summary attached to each task order, or as shown on the Drawings.
 - L. Live loads for each segment to be lined are noted in the Lining Summary at the end of this Section, attached to each task order, or as shown on the Drawings.
 - M. Soil depth for each segment to be lined is noted in the Lining Summary attached to each task order, or as shown on the Drawings.
- 10.2. The design thickness of the installed liner shall be accurately measured and certified by the Contractor. The actual thickness of the cured-in-place liner shall be within minus 5% and plus 10% of the design thickness.
- 10.3. The tube shall be designed to a size that will fit tightly against the internal circumference of the original conduit when cured, so there are no wrinkles or annular spaces between the host pipe and the cured-in-place pipe. This tight fit minimizes loss of original pipe size. Allowance for longitudinal and circumferential stretching of the tube during installation shall be made by the Contractor.
- 10.4. The Contractor shall design the length of the tube in order to effectively carry out installation and sealant at end points. All dimensions shall be field verified prior to fabrication and installation of the liner.

11. LINER FABRICATION:

- 11.1. The liner shall consist of one or more layers of absorbent flexible needled-felt, felt/fiberglass, fiberglass or ECR fiberglass or an equivalent woven/non-woven material that is capable of carrying resin, and meet the requirements of ASTM D-2990, ASTM F-1216, ASTM F-1743, ASTM D-5813 and ASTM F-2019, withstanding installation pressures and curing temperatures, and compatible with the resin system utilized. The liner shall be continuous and sufficient length to extend from manhole-to-manhole, fit irregular pipe sections, and a size fitting tightly against the existing pipe walls. Allowances for longitudinal and circumferential stretching of the liner during installation shall be made by the Contractor.
- 11.2. A suitable mechanical strengthener membrane or woven jacket may be used to control longitudinal stretching during installation, as the inflation tube may be left on the internal surface of the liner after curing. The minimum thickness of a bonded polyurethane membrane and inner liner shall be 0.2 mm and not affect the structural dimension requirements of the cured liner. The bonded polyurethane membrane and inner liner shall have a smooth finish, as well as no peeling, cracks, and crazing. In addition, the bonded polyurethane membrane and inner liner shall not affect the hydraulic characteristics of the liner system and all vacuum patches. Seam tape must be secured to liner. No leaks, frays, or loose edges will be acceptable. The liner fabric content shall be determined by the Contractor to ensure that the cured liner is of the required strength and thickness.
- 11.3. If fiberglass reinforcement is used, then reinforcement shall be type "C" fiberglass for maximum corrosion resistance.

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12. RESINS:

- 12.1. Resins used shall be compatible with the liner system employed. The resin shall not contain fillers except those required for viscosity control or fire retardation. The material supplied may be unsaturated polyester, epoxy or vinyl ester thermoset resins able to cure to final properties per manufacturer's specifications. The resin shall be sufficiently mixed with the proper mix ratio.
- 12.2. The resin system used shall be manufactured by an approved company, which is selected by the CIPP process manufacturer. Relevant information from the resin manufacturer shall include the following: specifications, characteristics, properties, ASTM C-581 test results, methods of application, and infrared spectrographic analysis of the resin used for each lot. This data shall be submitted to the County for approval prior to rehabilitation of the sanitary sewer.
- 12.3. The Contractor shall submit written certification from the resin manufacturer that the resin material used is compatible with the proposed application. The referenced certification shall address the curing temperature and curing schedule (i.e., duration of the temperature at all stages of curing). Field installation practices shall be checked against the aforementioned certification. No variance between the practices and the certification will be allowed without prior written approval of the County.

13. MATERIAL PROPERTIES:

- 13.1. The cured liner shall meet or exceed the material properties in the table below.

Material Property	Test Method	Minimum Value
Initial Flexural Strength	ASTM D-790	4,500 PSI
Long-term Flexural Strength	ASTM D-790	50% of Initial
Initial Flexural Modulus of Elasticity	ASTM D-790	250,000 PSI
Long-term Flexural Modulus of Elasticity	ASTM D-790	50% of Initial
Tensile Strength	ASTM D-638	2,500 PSI
Tensile Modulus	ASTM D-638	320,000 PSI

14. SEALS AND GROUTS:

- 14.1. The Contractor shall submit documentation confirming that the seal material is compatible with the liner material.
- 14.2. The Contractor shall submit manufacturer's documentation for grout design mixes and grout testing reports.

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15. WORKMANSHIP:

- 15.1. The finished lining shall be continuous over the entire length of an installation segment (between two manholes). The lining must be free of foreign inclusions, wrinkles, dry spots, lifts, pinholes, and delaminations. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe. The inner surface is to have a smooth finish and be free of peeling, cracks, and crazing. Some minor waviness that—in the County's opinion—will not appreciably decrease the flow cross-section or affect the flow characteristics shall be permissible.
- 15.2. The CIPP liner shall be sealed with an expandable water stop, such as Hydrotite or equivalent, at all manholes where the liner has been cut. The Contractor shall repair or seal all leaks around the liner in manholes.
- 15.3. Any defects, which will affect the integrity or strength of the lining or the hydraulic characteristics of the liner system, shall be repaired, or the liner must be replaced at no additional cost to the County.
- 15.4. The Contractor is to repair all manhole benches and inverts with a cement coating, such as Quick Crete or equal, during the over-pumping-operation after lining. A minimum ½" cement coating shall be applied to remove all loose materials and fill all voids prior to coating. Benches shall be trowel/ brushed and sloped back towards the invert in order to prevent water from ponding on benches, maximum 1 in 12 pitch. Inverts are to be trowel/ brushed smooth from incoming to outgoing pipes, as not to hinder flow. Any brick/block manholes that are disassembled must be reassembled using pre-cast components per the County Public Facilities Manual at no additional cost to the County.

16. EXECUTION:

- 16.1. The Contractor is solely responsible for the means, methods, techniques, sequences, procedures of the work and meeting safety requirements. The Contractor shall designate in writing the person who shall act as the Contractor's representative on the site. The representative shall have a thorough understanding of the contract documents and shall have previous experience in the type of work being performed. The representative shall be able to communicate in fluent English with full authority to act on behalf of the Contractor. All communications given to the representative shall be as binding as if given to the Contractor. The representative will be present on the site at all times when the work is in progress as required to perform adequate supervision and coordination of the Work as determined by the County
- 16.2. Care must be taken to insure that styrene levels are below USEPA standards for airborne, surface, and water contamination. The EPA has set the maximum contaminant level at 0.1 ppm for drinking water and other water sources that impact drinking water. For sanitary sewer flow to a sewage treatment plant, styrene contamination must be below 2.1 ppm so as to not interfere with the effectiveness of the plant.
- 16.3. Effluent from the curing process must be disposed of directly to a Publicly Owned Treatment Works (POTW) in full compliance with the POTW's Industrial Pretreatment requirements.

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- 16.4. If EPA or wastewater treatment levels are exceeded on the surface of the liner for sanitary sewer, the Contractor must flush the line until styrene levels in flush-water are brought within the appropriate standard. The responsibility for disposal of contaminate water is the sole responsibility of the Contractor, and must be delivered to POTW in full compliance with the POTW's Industrial Pretreatment Program requirements. Proof of proper disposal, as specified above, must be presented to the County Project Manager.
- 16.5. The Contractor is to deliver the uncured resin impregnated liner to the site and provide all equipment required to install the liner into the conduit. The Contractor shall expand the liner in accordance with the manufacturer's standard procedures and cure it in place. The liner shall be impregnated with resin and stored in accordance with the manufacturer's recommended procedures, any liner that is not installed within the proposed time frame of installation will be removed from site at no additional cost to the County.
- 16.6. A Resident Notification Letter, 2-sided (1 side English, 1 side Spanish), shall be provided by the Contractor and approved by the County. The Contractor shall deliver the notification letter to each residence affected by the installation process a minimum of seven (7) business days prior to commencing work. The Resident Notification Letter shall be hand delivered or mailed to each affected resident prior to lining. At a minimum, hand-delivered letters will be placed on the Front, Side, and/or Garage doors of residents. Preferably, the letters will be delivered directly to the resident whenever possible.
- 16.7. Residents are to be informed of when wastewater and/or water service interruption will take place and its duration. The Contractor is required to have an established public relations program. Upon request, the Contractor will provide documentation of the employee training focused on this relations program.
- 16.8. The Contractor, if necessary, will turn off the water service connection servicing each residence prior to liner installation and turn it back on after the sewer service connection is complete.
- 16.9. The Contractor is required to be on site no later than 7:30 a.m. with all necessary equipment in working order. The Contractor is responsible for arrangements of lodging and meals for any resident that cannot be in service by 8:00 p.m. on a workday where lining takes place. No work, unless required by an emergency and authorized by the County, will be performed on weekends and holidays.

The County may issue work in phases. Should the County elect to issue a new phase of work the Contractor may not pursue the new work unless the Contractor can demonstrate work in the prior phase is being completed to the satisfaction of the County. Should the Contractor not meet this requirement the County may stop work on the new phase until the prior phase is completed, at no additional cost to the County. The Contractor will only be compensated at the prices listed in the pricing schedule for work the completed as directed.

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- 16.10. Work performed shall be in accordance with local, state, and federal standards and requirements. Safety and maintenance of traffic are the responsibility of the Contractor.

The Contractor shall conduct work to ensure the least possible obstruction to traffic and inconvenience to the County, general public, and residents in the vicinity of the Work, and to ensure protection of persons and property.

The Contractor shall coordinate his work with all ongoing construction activities in connection to the work. This includes manhole rehabilitation contractors, by-pass contractors and other contractors as needed at no additional cost to Fairfax County.

- 16.11. Maintenance of Sewage Flows

The County has enlisted the services of a Consultant Engineer to design a temporary wet well structure (suction point for the Contractor's bypass system). The Contractor must coordinate and work with the consultant to construct the temporary wet well structure to be used as a suction point for his sewer bypass pumping system. Working with the consultant shall be furnished by the Contractor at no charge and any costs resulting from involvement with consultant are to be considered an overhead cost to be included in the lump sum price in the bid. The estimated price range of the temporary wet well structure will be provided at the mandatory pre-bid conference/site visit (ref. Special Provisions, paragraph 2). The Contractor will furnish, install, maintain, and remove a temporary wet well, suction point including site restoration to a pre-existing state in accordance with the design provided by the Consultant Engineer. For the purpose of the bid, bidders shall include the provided cost of this work in their bid in the lump sum price. During construction of the project, the Contractor will submit for review and approval a detailed breakdown of their actual cost for the temporary wet well after it is built as a submittal during the project. Should the cost be more or less than the specified range, the Contractor's contract price for the temporary wet well will be adjusted to reflect the change in price up to ± 10 percent of the price range.

- A. The Contractor is responsible for sewage bypassing around the pipe to be televised or lined. Pump and bypass lines are to be of adequate capacity and size, so that they can handle historical peak flow of at least 30 MGD (Million Gallons a Day) or as requested by the County without affecting the sewer line being lined service connections upstream.

The Contractor will coordinate with the County when bypass pumping will impact the pump station functions. The Contractor will provide written notice 2 working days in advance to coordinate meetings with Fairfax County pump station personnel as needed. Bypass pump times and duration must coincide with the functional needs of the pump station so that flows are maintained without damage or overflows.

- B. In addition to the maintenance of sewer flows from surrounding gravity sewer mains, the Contractor must maintain flows generated by the Fairfax County Sewage Pump Station, Little Hunting Creek, located at 8600 Stockton Parkway, Alexandria Va. 22308. The force main from this pump station empties into manhole 144 on Grid 110-2.

Bypass design and operations must account for flow surge from the force main. Flows from the Little Hunting Creek pump station must not be interrupted nor impeded at any time. Therefore, it is required for the sewer bypass system to include dual piping and at least one or more redundant back-up pumps.

The Contractor will construct a temporary wet well structure in accordance with the Plans and Specifications coordinate with the Consultant Engineer in the Appendix E. The temporary wet well structure will be utilized as a suction point to bypass sewer flows generated by the Little Hunting Creek pump station. See site map in Appendix I, Special Provisions, paragraph 1.6, and estimated price range will be provided at the mandatory pre-bid conference/site visit.

- C. The Contractor is responsible for cleanup, repair, property damage costs, and claims resulting from sewage overflow or backup caused by inadequate pumping or any other reason related to the Contractor's lining work. Pumps and equipment are to be continuously monitored, 24 hours per day, 7 days per week by the Contractor's staff stationed at the project site. The Contractor's staff assigned to monitor the bypass must be capable of starting, stopping, refueling, and maintaining this equipment during the rehabilitation work. The Contractor will have and use extra pump(s), piping, and hoses onsite to help reduce the chance of raw sewage leaks and/ or spills for quick repairs to the over-pumping operation.

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- D. The Contractor will take appropriate steps to ensure that all pumps, piping, and hoses carrying raw sewage are protected from vehicular traffic and pedestrian traffic.
- E. Flow Meters: Protect and remove as directed by the County. Generally, when flow meters are taken out of service the Contractor shall coordinate removal from manhole and replacement with the County. The meter will be stored at County Facilities as directed at no additional costs. The County will reinstall the meter when the Contractor's work is completed.
- F. When Suction and Discharge hoses are utilized in areas subject to pedestrian and/or vehicular traffic, the contractor shall connect to the sewer system with Bypass piping buried a minimum of 3 feet below finished grade and/or as directed by the Virginia Department of Transportation. Piping will be below finished grade in pedestrian and/or vehicular traffic areas to allow manhole tops to remain closed during by-pass operations. Piping outside these areas between suction and discharge points may be above ground in grass and wooded areas when installed with proper protections.
- G. In the event that the Contractor spills raw sewage, discharged, leaked, or otherwise deposits raw sewage in the open environment, the Contractor will be responsible for its cleanup of solids and disinfecting the affected area. This work is to be performed at the Contractor's expense with no additional cost to the County. In addition, the Contractor is responsible for notifying the County and complying with all regulatory requirements concerning spill size with no additional cost to the County. The Contractor shall be charged back for any fines, penalties, or other costs or damages imposed upon the County by any agency or private party as a result of a spill or improper discharge by the Contractor.
- H. The Contractor will provide a sewer by-pass plan, certified by Professional Engineer in the State of Virginia to include:
 - 1. Schematic of the pumps and piping system
 - a) Site map showing location and configuration
 - b) Pump sizes, capacity, operating ranges and power requirements to handle required flow
 - c) Float alarms and or method to monitor upstream lines for back-ups
 - d) Methods to secure and anchor all piping
 - e) Thrust restraint methods for fittings and piping
 - f) Set-up and breakdown procedures
 - g) A Certification Statement, affixed to the submittal
 - 1. Certification Statement:

"By this submittal, we hereby represent that we have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and pertinent data including field conditions, and have checked and coordinated each item with all Contract requirements as it pertains to the sewer bypass system on this project. We certify the Pump and Bypass lines are of adequate capacity and size to handle flow without causing a sanitary sewer overflow. The bypass system will not adversely affect the service connections upstream of the sewer being cleaned and/or televised."

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2. Suction and discharge hoses
 - a) Number
 - b) Size
 - c) Location of suction and discharge
 - d) Method to connect Buried By-Pass pipes to existing sewer system.
3. Calculations showing how pump sizes were selected, to provide
 - a) Anticipated Flow gallons per minute (gpm) and million gallons per day (mgd)
 - b) Friction head loss in pounds per square inch (psi)
 - c) Flow velocity in feet per second
 - d) P.E. Certification bypass will handle peak flows
4. Set-up and breakdown procedures
5. Emergency plan of action for the following events
 - a) Pump failure
 - b) Sanitary sewer overflow
 - c) Sewer back-up
 - d) Severe weather

16.12. Sewer Preparation Prior to Liner Installation

A. Excavation:

1. Excavations shall be made in accordance with OSHA guidelines. The Contractor shall contact Miss Utility at <http://www.missutilityofvirginia.com/>. The Contractor is responsible for locating and protecting all existing utilities and will not receive additional compensation for meeting this requirement. The area will be restored at no additional cost to the County.
2. Notification: Prior to excavation notify Fairfax County Fire and Rescue Department and advise them of the type of work to be performed, where it is being performed and the proposed schedule of Work. If the schedule is modified, provide modification to the Cave-in Unit at:

Station Commander fire Station 18
Fairfax County Fire and Rescue
3101 Hodge Place
Falls Church, VA 22042
Phone: 703-573-4505

16.13. Cleaning of Sewer

- A. Prior to any CIPP reconstruction process, it is the Contractor's responsibility to clean debris out of the sewer line in accordance with the "Sewer Line Cleaning" section of the most recent publication of NASSCO's Specification Guidelines (for) Wastewater Collection Systems Maintenance & Rehabilitation. In addition, prior to television inspection and video recording, the sewer will be cleaned so that the video camera can adequately discern structural defects, misalignments, and points of infiltration. Prior to pipe rehabilitation, all sand, rocks, gravel, mud, grease, and other debris that could interfere with or have an adverse impact on the success of the rehabilitation must be removed. Protruding laterals shall be cut to ½ inch prior to rehabilitation at no cost to the owner.

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- B. The Contractor must collect and remove solids and debris resulting from the cleaning operation from the downstream manhole. The Contractor shall dispose of this material at a site selected by the Contractor and approved by the County. Under no circumstance is sewage or solids to be dumped onto the surface, street, or into waterways, ditches, inlets, or storm drains.

16.14. Television Inspection

- A. After the sewer section to be lined has been cleaned, after liner installation, and reinstatement of lateral connections; the line is to be inspected with a television camera that is able to provide a total view (up and down, side to side- by panning a minimum of 275 degrees and rotating 360 degrees). Lighting for the camera shall be directed and of sufficient intensity to provide a clear picture of the existing sewer's periphery. The Contractor will supply the County a clear, viewable DVD video recording in color, which shows the line segment from the centerline of one manhole to the centerline of the next manhole. This video is to include service connections, before and after the lining process, that are recorded back-to-back on DVD. A copy of all records and recordings are to be submitted to the County upon request, on a weekly basis, and with invoicing. If both pre- and post- rehabilitation DVDs are not presented prior to invoice, payment will not be made and the invoice will be returned as incomplete. If the pre-rehabilitation recording is not available, then the line segment will be accepted upon written approval at no cost to the County.
- B. The camera must be centered in the line, moved through the line in either direction at a uniform rate, consistent with NASSCO standards and stopped when necessary to permit proper documentation of the sewer's condition and features. The camera is not permitted to be pulled at a speed greater than 30 feet per minute. The camera will be panned, tilted, and rotated as is necessary to best view and evaluate all features and points of interest found. If the television camera will not pass through the entire sewer segment during the pre-inspection operation, then the Contractor shall set up the equipment so that the pre-inspection can be performed from the opposite manhole. A blower is to be used, as needed, to defog the sewer line and promote a clear picture.
- C. Televising and video recording after rehabilitation and reinstatement of lateral connections will be conducted without wastewater in the sewer lines.
- D. The video recording must include a view into each service connection before use and, if possible, in use after the lining process. If the connection cannot be shown in use, then a thorough video inspection of the connection will be required before moving through the line. The video recording shall indicate "resident not available, flush test not possible." At service connections, the Contractor shall slowly scan the entire edge of the service connection (360 degrees).
- E. Both ends of the liner within manholes are to be scanned/ televised and video recorded in order to determine proper cutting and detection of any leaks between the liner and the host pipe.
- F. Each line segment will be identified by street name, upstream and downstream manhole numbers, date, length of line, and liner thickness. Each service connection will be identified by house number and street name. This information shall be indicated on the video recording using audio and/or superimposed text.

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- G. Each line segment is to be measured to determine the exact length for billing purposes during televising and video recording. Measurement for location of rehabilitation must be by the footage meter on the cable (or a mutually agreed upon device), which shall appear continuously on the video picture of the DVD. Footage meter shall be standardized to reflect the distance from the inside wall of the starting manhole to the inside wall of the ending manhole. Accuracy of the distance meter shall be checked by use of a walking meter, roll-a-tape, or other suitable device. Logs and DVDs shall indicate the location of all noted features, relative to the inside walls of the manholes.

16.15. Sewer Preparation Prior to Liner Installation

- A. Prior to liner installation, all active leaks of a magnitude to compromise the liner shall be stopped by the Contractor using chemical grout.
- B. If protruding pieces of concrete, "dropped" joints, broken pipe, major blockages, or other conditions are found that would prevent proper cleaning, installation of liner or cause additional damage, then the County may perform the necessary repairs of the defect or direct the Contractor to repair the defect to ensure the sewer is left in working condition for the Contractor. This action will transpire, unless otherwise jointly determined by the County and the Contractor that the defect will not compromise the integrity of the liner.

16.16. Liner Installation, Curing, and Cool-Down

- A. The installation process may use water, air, winch, or any other suitable means to fully extend the liner to the termination point, expand the liner to equal the conduit inside diameter, and dimple the service connections. Care shall be taken during the installation not to over stress the liner material.
- B. For review, the Contractor will provide to the County a description of the methods for avoiding liner stoppage due to conflict and friction with such points as the manhole entrance and the bend into the pipe entrance, along with plans for dealing with a liner stopped by snagging within the pipe. In cases where the downstream sewer segments have previously been lined, the Contractor will submit a plan for protecting the downstream rehabilitated (lined) sewer during the lining process.
- C. The Contractor is to carefully measure, custom cut, adapt (if necessary), etc. the main-line sewer pipe for the liner tube to fit the pipe to be rehabilitated.
- D. The Contractor shall impregnate the liner tube with the appropriate resin system under controlled conditions in accordance with the manufacturer's recommendations. The resin shall be properly stored and have the proper mix ratio in accordance with the manufacturer. The volume of resin used should be sufficient to fill all voids in the tube material at nominal thickness and diameter. The volume should be adjusted by adding five (5) to ten (10) percent excess resin for the change in resin volume due to polymerization in order to allow for any migration of resin into the cracks and joints in the host pipe. The Contractor shall submit the actual resin volume used. The Contractor shall test each lot of resin used by conducting infrared spectrum analyses on field samples.

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- E. During inversion, the pressure holding the tube tight against the host pipe must be maintained between the minimum and maximum pressures, as specified by the tube manufacturer, until the inversion has been completed. If the Contractor plans to use a lubricant during inversion, the product specifications shall be submitted to the County for review and approval prior to use. The lubricant is not to cause any upset to downstream wastewater treatment plants or stream systems.
- F. Allowing the liner to cure in accordance with the liner and resin manufacturers' recommendations. The installed liner tube may be cured utilizing heated air, water, ultra violet (uv) or steam. The Contractor shall provide a suitable heat source and recirculation equipment capable of delivering the heated medium to the far end of the liner quickly and uniformly in order to raise the temperature of the inserted liner to start the exothermic reaction of the resin. Therefore, effectively curing the resin as determined by the catalyst system employed.
- G. Submit an installation, heating, curing, and cool-down schedule plan for each manhole-to-manhole section one (1) week prior to scheduled installation. Temperatures shall be measured throughout installation and curing at both ends of the tube by accurate measuring devices.
- H. Temperature in the pipe during the cure period is to be as recommended by the resin manufacturer. The heat source is to be fitted with suitable monitors to gauge the temperatures in and out of the line to determine when uniform temperature is achieved throughout the length of the liner. Another such gauge shall be placed between the tube and the host pipe in the downstream manhole, at or near the bottom, to determine the temperatures during cure. The temperature will be maintained for the period of time required to properly cure resin, as recommended by the resin system manufacturer and determined by the existing pipe material, diameter, length, liner thickness, and ground conditions (moisture level, temperature, and thermal conductivity of the soil).
- I. The Contractor is required to ventilate upstream and downstream manholes to reduce styrene odor, and use fans, pressure cleaners, or other means to reduce and/or eliminate styrene odors.
- J. The new pipe will be cooled at temperatures recommended by the liner manufacturer before relieving the pressure or static head. Cool-down will be accomplished so that a vacuum will not damage the installed line.
- K. The liner pipe shall be cut off in the manhole at a suitable location. The finished product is to be continuous over the length of pipe reconstructed and free from pinholes, cracks, thin spots, dry spots, uncured resin, delamination, and lifts. There are to be no visible infiltration through the liner or from behind the liner at manholes and service connections. Should the liner not achieve a tight seal to the inside manhole wall, a proper seal shall be made to a watertight condition by use of extra fiber felt, a suitable resin system, or other County approved methods. Pipe entries and exits are to be smooth, free of irregularities and watertight. No visible leaks shall be present. The Contractor must repair leaks or fill voids between the host pipe and the liner by grouting or other approved method, if necessary. During the warranty period, any defects that will affect the integrity or strength of the product are required to be repaired at the Contractor's expense in a manner acceptable to the County (Ref: Technical Specifications Part A, paragraph 8- Warranty).

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- L. The Contractor shall submit "Wet Out" and "Cure" Reports documenting the specific details of the liner's impregnation, saturation with resin, and the installation of the CIPP liner on CD or by email. A copy of all "wet out" and "cure" records are to be made available to the County, and turned over to the County on a weekly basis and prior to request for payment. If the "wet out" and "cure" reports are not presented prior to an invoice for a repair work order, then payment for the work will not be made and the request will be rejected. In addition to contractor and contract identification, this report shall include the following as a minimum:
1. Line segment identification and location;
 2. Wet out date and tube tracking sheet;
 3. Sample identification(s) and technician;
 4. Installation (in sewer) date;
 5. Host sewer pipe inside diameter;
 6. Liner thickness;
 7. Liner length;
 8. Liner and resin batch numbers;
 9. Resin type;
 10. Wet out length;
 11. Quantity of resin and catalyst utilized;
 12. Roller spacing;
 13. Wet out technicians;
 14. Time wet out started and completed;
 15. Vacuum setting;
 16. Applicable remarks;
 17. Hot Water Installation – Water Boiler and liner heating fluid pressure and temperature versus time log during cure period;
 18. Steam Installation – Steam Boiler and liner heating pressure and temperature versus time log during cure period;
 19. Ultra Violet (UV) Installations – Curing speeds, light source working and wattage, inner air pressure, and exothermic (curing) temperatures
 20. Cool-down report.
- O. Draft and Final Invoice requirements, for each invoice include:
1. Contractor name and address
 2. Invoice number and PO Number
 3. Invoice date and date of each inversion
 4. Year and phase of work
 5. Grid and manhole numbers
 6. Street name for each inversion
 7. Unit rates
 8. Quantity installed
 9. Total cost of each sewer line segment
 10. Total cost of invoice
 11. Final invoice to include signature by company official who has authority to approve payments
 12. Provide Pre and Post CCTV reports with each Invoice and DVD with Video
 13. Provide wet out and cure reports with each Invoice
 14. Clearly label and date each, wet out, cure report, pre and post CCTV to identify the correct sewer line segment it represents.
 15. Invoices for sewer line segments slated for sampling may not be paid until test results for samples have been submitted and accepted by the County.
 16. Provide pre and post Video on DVD meeting Television Inspection requirements herein.

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17. Submit all invoices complete with all the required items. Partial and incomplete invoices will not be accepted and will be rejected.

16.17. Service Connections

- A. The re-connection of active service connections are to be completed, unless otherwise specified without excavation from the interior of the pipeline by means of a television camera directed cutting device. All re-cut service connections shall be neat, smooth, and free of all burrs, frayed edges, or any restrictions preventing free flow. Service connections shall be trimmed and wire-brushed to 100% of the original opening. No coupons, debris, or shavings shall be left inside the service connections or the lined pipe. The County will provide the Contractor with the approximate location of house service connections. The Contractor will confirm if service connections are active or inactive during the pre-rehabilitation television inspection of the line. The Contractor will notify the County upon identifying a suspected inactive connection. At this time, the County will investigate and inform the Contractor if the connection is active and to be cut. It is the intent of these specifications not to re-connect inactive connections. However, there is a potential of connection misidentification or inadequate connection reopening resulting in sewage back up in private homes. The Contractor shall be responsible for all damages to private properties due to defective work. The contractor shall provide a sample DVD of acceptable re-connections, for review and approval by the owner.
- B. The Contractor shall maintain a crew or plumber capable of responding after one-hour' notice to emergencies that may occur as a result of the lining process. The plumber must have the capability to televise the service connection to determine the cause of the blockage and remove it. The Contractor is to provide a minimum of two (2) 24-hour telephone numbers to be contacted in case of an emergency.
- C. The Contractor will be responsible for all costs incurred from deficiencies related to the lining procedure. In the event a service connection is not properly reinstated, the Contractor shall rectify the defect without cost to the County or the property owner.
- D. The Contractor shall stop all visible leaks, including those at service connections, to achieve a watertight seal.
- E. The camera shall slowly scan the entire edge of the service connections (360 degrees) during televising
- F. The awarded contractor shall provide a sample pictures/DVD of lateral re-connections at the preconstruction meeting, for review and approval by the County.

16.18. Repairs - Inspection and Testing

- A. Each rehabilitated length of CIPP will be inspected via television inspection. The CIPP shall conform to the standards of workmanship described in Technical Specifications paragraph 15. If any pinholes, leaks, thin spots, dry spots, delamination, lifts, or other defects or inferior workmanship are found, the defects and inferior workmanship shall be corrected by the Contractor to the satisfaction of the County.
- B. The Contractor shall submit a method for approval to the County in order to obtain representative samples from the installed liners for testing to verify compliance with installed material specifications.

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- C. For sewer mains, each inversion shot will be tested. The County will select sections of reconstructed gravity sewers 12-inch diameter or less comprising approximately 20 percent of the total project length for testing. For sewer mains larger than 12-inch diameter, each inversion shot will be tested. The Contractor shall provide certified testing of three (3) CIPP specimens for the flexural and tensile properties for each segment selected. The specimens shall be cut from a selection of installed and cured liner at an intermediate manhole or at the termination point that has been inverted through a like diameter pipe that is held in place by a suitable heat sink, such as sandbags or per manufacture recommendations for taking samples. The sample should be fabricated from material taken from the tube, the resin/catalyst system used, and cured in a clamped mold placed in the down tube, when circulating heated water is used, and in the silencer, when steam is used. The following test procedures shall be followed after the sample is cured and removed:
 - 1. Short Term Flexural (Bending) Properties - The initial tangent flexural modulus of elasticity and flexural strength should be measured for gravity pipe applications in accordance with ASTM D-790 and meet the requirements.
 - 2. Tensile Properties - The tensile strength and tensile modulus should be measured for gravity pipe applications in accordance with ASTM D-638 and will meet these requirements.
- D. Testing is to be performed by an independent laboratory proposed by the Contractor and approved by the County. All expenses for the certified testing of specimens under this contract shall be paid by the Contractor.
- E. Liner thickness is to be within minus 5 percent and plus 10 percent of the design thickness. Thickness greater than design will not be allowed if the hydraulic capacity of the pipe is reduced. The thickness must be measured accurately using properly calibrated calipers.
- F. Specimens taken as part of paragraph 16.16C above are subject to delamination tests by aggressively prying and separating into layers with a knife or sharp-edged instrument. No separation is allowed. Results shall be included in the laboratory's report.
- G. Liners that do not pass these inspections and materials tests will not be accepted and must be replaced by the Contractor at their cost. Liners not meeting all requirements including testing and inspections will not be paid for.

16.19. Installation of Odor Control Vent Valves

- A. After the completion of the sewer manhole and pipe rehabilitation on this project, the County will determine locations suitable for the installation of Odor Control Vent Valves. These Odor Control Vent Valves will be installed at 4 locations where rehabilitation under this contract caused sewer odors. The locations will be selected which are the most effective in removing the sewer odors. Installations can occur from manhole 110-2-144, the manhole at the upper reach of the project to manhole 110-1-211, located approximately 13,000 feet down flow from the last manhole rehabilitated on this contract (110-1-059).

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- B. Requirements and Specifications for constructing Odor Control Vent Valves can be found in Appendix F.

16.20. Clean-Up

- A. The Contractor shall keep the work area in a neat and orderly condition by frequent removal of debris. Upon completion of the lining process at each location, all debris, unused material, equipment, hoses, etc. shall be promptly removed from the area. The area will be left in a condition similar to, or better than, before the work was performed.

16.21. Property Damage

- A. Any damage to the County's infrastructure, private property, or other public property (homeowner backups, dead grass, damaged pavement, concrete, fences, etc.) will be immediately repaired or rehabilitated to the County's satisfaction at no additional expense to the County or property owner(s) in question. The property owner(s) and/or the County will be notified of the problem and the repair method. The Contractor must expedite the insurance process and take responsibility of all applicable clean up, replacement of materials, and/or repair to residences. All repair work must be completed to the satisfaction of the County or Homeowner(s).
- B. Upon award of the contract, the Contractor must have a Landscape contractor and a Plumbing contractor to address any concerns by the Homeowners caused by the lining process.
- C. In the event of a backup, the Contractor shall have a certified laboratory available for performing bacteria testing for residents when all backups occur or other fecal matter issues arise at no cost to the County or its residents.
- D. In the event of a backup, all work performed by the Contractor must be in accordance with the guides for Professional Water Damage Restoration (IICRC S500) and Professional Mold Remediation (IICRC S520), unless otherwise stated. The Contractor is to have one-person onsite that is certified in accordance with the guides for Professional Water Damage Restoration (IICRC S500) and Professional Mold Remediation (IICRC S520) at no cost to the County or the Homeowner. The Contractor shall submit a Written Summary of each sewage back up with details of: what caused it, content of the damage, what was done, and a remedy to prevent a reoccurrence to the County's Project Manager within two (2) business days.

16.22. Punch List Items

- A. The Contractor must correct any problems found within 60 business days of discovery. If a problem is not corrected within 60 business days, then the County will charge the Contractor a penalty of \$100.00 per business day. The Contractor shall maintain an updated list of Punch List Items and submit it to the County once a week.
- B. The Contractor shall be physically and financially able to keep all "Punch List Items" caught up in the phase they are working. All punch list items will be completed before the next phase of work can be started, with 90% of the current phase work approved for payment.

ATTACHMENT 1

TECHNICAL SPECIFICATIONS

PART A1

GRAVITY SEWER AND LATERAL SEALING

TECHNICAL SPECIFICATIONS PART A1
GRAVITY SEWER AND LATERAL SEALING

Specification for Lateral Connection Sealing using the Cured-In-Place
Process (CIPP) Insert in Relined or Unlined Sewer Mains

The intent of this portion of the Specification is to provide for the rehabilitation and reconnection of service, lateral connections to be rehabilitated and non-rehabilitated sewer lines without excavation, by installation and ultraviolet (UV) light curing of resin-impregnated, flexible fiberglass insert with sealing epoxy element in the form of a cured-in-place tube that will be installed into the existing lateral service utilizing a pressure apparatus and ultraviolet light curing device positioned in the mainline pipe.

The resin shall be rapidly cured to transform the flexible insert into a hard, impermeable seal around and in the lateral connection. The service lateral connections product shall extend from the mainline into the lateral connection in a continuous tight fitting, watertight pipe-within-a-pipe to eliminate any visible ground water leakage and future root growth at the lateral to mainline connection.

1. MATERIAL REQUIREMENTS:

Liner:

- 1.1 The finished service lateral connections product shall be made of fiberglass materials and shall be corrosion resistant E-glass (ECR-glass) or approved equal.
- 1.2 The service lateral connections product shall be compatible with the lining system utilized for the main and/or lateral sewer lines.
- 1.3 This specification references the American Society for Testing and Materials (ASTM) standards that are made part hereof by reference and shall be the latest edition and revision.
 - D543 Testing Method of Plastics to Chemical Reagents
 - D578 Standard Specifications for Glass Fiber Strands
 - D1600 Abbreviations of Terms Relating to Plastics
 - D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

The Cured-In-Place Lateral Connection Insert shall be Amerik Industries or approved equal.

Grout:

- a. The grouting equipment shall be compatible with the requirements of mixing, pumping and placing of the specified materials.
- b. The grout used shall have a controllable reaction time, from 10 seconds to one hour at temperatures from ambient to freezing.
- c. It shall be a true solution with a viscosity of 1.2 centipoises (a 10% solution) which remains constant until gelatinization occurs.
- d. Able to tolerate ground water dilution react in moving water.
- e. The final reaction shall produce a continuous irreversible impermeable still gel, not to be rigid or brittle.

TECHNICAL SPECIFICATIONS PART A1
GRAVITY SEWER AND LATERAL SEALING

- f. Grout material shall be Avanti AV-100, Scotch-Seal 5610 by 3m Corporation, or an approved equal.

2. LINE PREPARATION:

- 2.1 Prior to installing the service lateral connections product, the area around the lateral sealing surface in both the main and lateral shall be inspected. Waste product build-up hard scale, roots, lateral cutting debris or resin slugs must be removed using high-pressure waterjetting or in-line cutters.
- 2.2 Break-in connection and/or lateral pipe protruding into the mains shall be ground back to no more than a 1/8-inch protrusion into the machine.
- 2.3 Built-up deposits on the main and lateral pipe walls shall be removed. The removal shall reach at least one foot beyond the service lateral connections product to allow the bladder to inflate tightly against the pipe walls ensuring a smooth transition from service lateral connections product to the existing pipe wall.
- 2.4 In relined pipes, the lateral must be opened 100 percent and edges smoothly finished without burrs. Over-cuts shall not exceed one inch beyond the internal diameter of the lateral.
- 2.5 If needed the Contractor shall be responsible for bypassing of sewage during the installation of the service lateral connections product. In cases where the temporary backup of sewage is accepted as a replacement for bypassing, the Contractor is responsible for all damages caused by the backup.

3. SERVICE LATERAL CONNECTIONS:

- 3.1 The resin impregnated service lateral connections product shall be loaded on the applicator apparatus, attached to a robotic device, and positioned in the mainline pipe at the service connection that is to be rehabilitated. The robotic device together with a television camera will be used to align the service lateral connections repair product with the service connection opening. The completed lateral connection product shall form a smooth transition from service lateral connections product to pipe diameters without a step, ridge, or gap between the service lateral connections product and the inner diameters of the lateral and mainline pipes.
- 3.2 The finished service lateral connections product shall be free of dry spots, lifts, and delamination. When using a closed circuit television camera, the installed service lateral connections product should not inhibit the post installation video inspection of the mainline and service lateral pipes or future pipe cleaning operations.

4. SERVICE LATERAL CONNECTION REQUIREMENTS:

- 4.1 Service lateral connections may be a combination of tee's, wye's, or break-in taps of varying sizes and angles; from 30 to 90 degrees.
- 4.2 The flexible fiberglass tube insert shall be fabricated to a size that when installed will key into the internal surface irregularities of the lateral joint and neatly fit tight to the internal circumference of the lateral. The tube shall be a laminate made of non-woven fiberglass materials that allow for circumferential stretching and angular alignment with the lateral pipe connection geometry during insertion.

TECHNICAL SPECIFICATIONS PART A1
GRAVITY SEWER AND LATERAL SEALING

- 4.3 The insert laminate shall seal to the inside wall of the sewer main with a minimum of 3 inches around the lateral opening to the lateral wall with a minimum of 6 inches, no more than 12 inches up into the lateral pipe from the main.
- 4.4 Unless otherwise specified, the installer shall furnish a specially formulated polyester resin and catalyst system compatible with the service lateral connections process that provides cured physical strength at least to the same level as required for the lateral liner if specified.
- 4.5 A secondary epoxy-sealing component shall be used to form a sealing bond between the service lateral connections product and the host lateral and main pipe walls.

5. PHYSICAL PROPERTY REQUIREMENTS:

- 5.1 The cured service lateral connections shall conform to the minimum standard listed below:
- Flexural Modulus of Elasticity 800,000 psi (minimum)
 - Flexural Strength 26,000 psi (minimum)
 - Tensile Strength 14,500 psi (minimum)
 - Wall Thickness 0.12 inches (minimum)
 - Glass Content 30-50%

6. TESTING REQUIREMENTS:

- 6.1 The Contractor is required to perform a CCTV inspection for all installations completed under these Technical Specifications. The CCTV inspection shall demonstrate that the Contractor used the proper procedures, materials, connections, etc., for the cure of the materials and the overall integrity of the repair performed by the Contractor. If the results of the CCTV inspection are not satisfactory to the County, the County reserves the right to reject any or all installations where the lateral insert is not properly cured or adhered to the host piping, or that may show signs of improper installation. All rejected work will be completed to the satisfaction of the County, at no additional costs to the County.
- 6.2 The County will select approximately 20 percent of the reconstructed sewer section for testing. For each segment selected by the County, the Contractor shall provide certified testing of three specimens for the flexural and tensile properties. The specimens shall be taken in accordance with the manufacturing recommendations at no additional costs to the County.
- 6.3 The Contractor is responsible to have an independent laboratory perform the certified testing. The County shall approve the Contractor's laboratory prior to commencing work. All expenses incurred for the certified testing of specimens under this contract shall be the responsibility of Contractor.

ATTACHMENT 1
TECHNICAL SPECIFICATIONS
PART B
MANHOLE REHABILITATION

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

1. GENERAL:

- 1.1 The Contractor shall be responsible for access to the manholes for work to be completed and removal of the materials used to the satisfaction of the County. **Providing Odor Control Vent Valves, stream crossings, temporary roads, construction entrances, sediment controls, permits, traffic control plans, traffic controls, site restoration, public outreach, all testing, CCTV, Cleaning Sewers, bypass pumping and any other items not listed in the Pricing Schedule are incidental to the contract. Costs for these items and all access shall be included in the Lump Sum price in the Pricing Schedule of this solicitation**
- 1.2 The Contractor is expected to have become familiar with and take into consideration, site conditions that may affect the work and to check all dimensions at the site.
- 1.3 The Contractor shall be thoroughly acquainted as to the characteristics and nature of the work to be performed. The Contractor shall examine the work site to become familiar with any difficulty that may be encountered at the site; the facilities for delivering, storing and placing materials and equipment; and/or at any other site relating to construction and labor where conditions may be challenging.
- 1.4 No plea of ignorance of the conditions that exist on the work site or difficulties that may be encountered in the execution of the work, as a result of failure to make necessary investigations and examinations, will be accepted as a reason for any contractual failure or omission.
- 1.5 The Contractor must employ such methods or means as will not cause interruption of or interference with the public access, work of any other Contractor, or County personnel at the site.

2. SCOPE OF WORK:

- 2.1 The work includes, but is not limited to, the following:
 - A. Prior to rehabilitation: sewer manhole cleaning & prep work, closed-circuit television (CCTV) inspection in accordance with NASSCO standards, and video recordings of existing sewers and service connections
 - B. As required and at the direction of the County, completing spot repairs, and sealing active leaks by the Contractor's method for manhole reconstruction
 - C. Sewage bypassing and maintenance of flow as appropriate for the rehabilitation of sewer following Technical Specifications part A and B of this document.
 - D. Structural reconstruction of existing sewer manholes by the various methods contained herein and as specified.
 - E. Reinstatement of lateral connections at manholes without excavation
 - F. After rehabilitation and reinstatement of lateral connections, CCTV inspection, and video recordings of sewer manholes **without** wastewater in the lines
 - G. Performance of acceptance testing
 - H. Provision of a one-year warranty or manufacturer's warranty whichever is greater as determined by the County.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- I. Maintenance of traffic in accordance with local, state, and federal requirements
- J. Safety requirements in accordance with local, state, and federal requirements
- K. Obtaining all necessary permits and providing copy to the County.
- L. Notification of Homeowners or Businesses
- M. Attending progress meetings and providing progress photos for the duration of the project, prior to the start of work to final clean up and completion.
- N. Providing all submittals at no cost to the County
- O. All restoration including roadway restoration in accordance with VDOT Specifications

3. INFORMATION TO BE PROVIDED BY THE COUNTY:

3.1 The County will provide the Contractor:

- A. A list of Manholes slated for rehabilitation
- B. Highlighted grid maps and/or geographic information system (GIS) map information of the County's sewer lines to be done. Bidders may refer to the following link for printable county maps: <http://www.fairfaxcounty.gov/gis/DMV/Default.aspx>

4. REFERENCE SPECIFICATIONS:

- 4.1 Revisions to any of the references below (ref. Technical Specifications Para. 4.2. A. - L., 4.3. thru 4.9) prior to the time of the bid opening shall apply.
- 4.2 American Society for Testing and Materials (ASTM) (<http://www.astm.org>)
 - A. ASTM C-78: Standard Test Method for flexural Strength of Concrete
 - B. ASTM C-109: Standard Test Method for Compressive Strength of Hydraulic-Cement Mortars
 - C. ASTM C-157: Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
 - D. ASTM C-307: Standard Test Method for Tensile Strength of Chemical-Resistant Mortar Grouts, and Monolithic Surfacing
 - E. ASTM C- 580: Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes
 - F. ASTM C-596: Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement
 - G. ASTM C-882: Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- H. ASTM D-638: Standard Test Method for Tensile Properties of plastics
- I. ASTM D-792: Standard Test Methods for Density and Specific Gravity (relative Density) of plastics by Displacement
- J. ASTM D-4787 – Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates
- K. ASTM D-4833 – Standard Practice for Index Puncture Resistance of Geomembranes and Related Products
- L. ASTM F-2414 – Standard Practice for Sealing Sewer Manholes Using Chemical Grout
- 4.3 Fairfax County Public Facilities Manual.
<http://www.fairfaxcounty.gov/dpwes/publications/pfm/> and
<http://www.municode.com> – Chapter # 104 Erosion and Sedimentation Control
- 4.4 Virginia Department of Transportation (<http://www.virginiadot.org/>)
 - A. Land Use permit Manual
 - B. Road and Bridge Specifications
- 4.5 Manual of Accident Prevention in Construction, Associated General Contractors of America (Fairfax Water reference) <http://store.agc.org/Safety/General-Safety/0101>
- 4.6 Virginia Storm Water Management Program
<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>
- 4.7 Virginia Department of Conservation and Recreation
<http://www.dcr.virginia.gov>
- 4.8 The Chesapeake Bay Preservation Ordinance and Amendments
<http://www.municode.com> – Chapter # 118 The Chesapeake Bay preservation Ordinance and Amendments
- 4.9 Federal Specification HH-P117 for Dry Oakum

5. SUBMITTALS: (Requires electronic submittals such as, emails or CD's)

- 5.1 A copy of the weekly work schedule submitted in Excel two working days in advance. Schedule to contain:
 - A. Company Name
 - B. Contact information for crew and superintendent
 - C. Dates and name for each day
 - D. Street names or stream name where work will take place
 - E. Manhole Numbers, County Grids and coordinates
 - F. Manhole size
 - G. Manhole depth and number of sewer house connections (Taps) for each manhole
 - H. Comments/Description of work

Failure to comply with this requirement and/or provide public notification in accordance with the contract may result in the issuance of a work stoppage; see Special Provision 48 - **RIGHT TO STOP WORK OR TERMINATE CONTRACT.**

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

5.2 Submit the following

- A. Working drawings showing design calculations, materials selected, and manufacturer's installation requirements.
- B. Catalog data showing manufacturer's clarifications and updates, ASTM references, material composition, specifications, physical and chemical properties.
- C. Manufacturer's recommended procedures for handling, storing, repairing, and installing materials selected.
- D. Method of construction (as appropriate):
 - 1. Access manholes and site locations.
 - 2. Work dimensions.
 - 3. Existing utilities.
 - 4. Size of working area.
 - 5. Impacted portions of existing sewer.
 - 6. Site access points.
 - 7. Bypass pumping plan: Follow Technical Specification Part A, section 16.11. Maintenance of Sewage Flows
- E. Emergency plan detailing procedures followed in event of health and safety emergency, pump failures, overspray, chemical spills, sewer overflows, service backups, and sewage spillage. Maintain copy on site for duration of project.
 - 1. Address dangers associated with sewer rehabilitation work (i.e. working with large boiler trucks, confined space etc.)
 - 2. Identify health and safety officer (i.e. crew chief)
 - a. Designated health and safety officer
 - 1. Responsible for providing health and safety oversight of personnel participating on project team.
 - 2. Perform and document routine work area inspections, conduct safety meetings, and provide safety orientations for team members.
 - 3. Have the following contact information in easily accessible place;
 - Non-emergency Number
 - Contractor's health and safety representative name and number
 - Occupational health clinic number(s).
 - b. Submit the Following:
 - 1. List of critical rehabilitation equipment, including boiler truck equipment, to be inspected on daily basis.
 - 2. Recently completed (previous month) monthly maintenance log.
 - 3. Annual third party certified inspection for boiler truck(s) to be used on project.
 - 4. Certification of training for boiler truck operator.
 - 5. Noise attenuation
 - 6. Safety procedures
 - 7. Material Safety Data Sheets (MSDS)

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- F. Epoxy and cured-in-place (CIP) manhole liner products.
 - 1. Infrared spectrograph chemical fingerprint and Certificate of Analysis for each lot of material:
 - a. Lot Number
 - b. Product name.
 - c. Manufacturer.
 - d. Brookfield Viscosity.
 - e. Thix Index.
 - f. Gel time at cure temperature.
 - g. Peak temperature for failure.
 - h. Percent of non-volatile solids.
 - i. Specific Gravity.
 - j. Catalyzed Stability time at optimum temperature.
 - k. Catalyst to resin ratio.
 - l. Analysis signature.
 - m. Date tested.
 - n. Batch ticket for each resin-catalyst-colorant batch made up and impregnated into felt liner material.
 - 2. Shipping manifest:
 - a. Date shipped.
 - b. Origination and delivery locations.
 - c. Shipping method and carrier.
 - d. Shipping order number.
 - e. Purchase order number.
 - f. Shipping item.
 - g. Stock number.
 - h. Lot number.
 - i. Manufacturer.
 - j. Any shipping, storage, or safety requirements.
 - k. Received by and date.
 - l. Signature of receiver.
- G. Stock sheets, order forms, delivery forms, invoices, and Hazardous Material forms for materials used
- H. Certified statement from manufacturer approved installer of their system
 - 1. Include certificates of training from manufacturer for each crewmember involved in installation process.
- I. Documentation of Products and Installers: County's approval required before installation of rehabilitation materials.
 - 1. Descriptions of projects completed in past 2 years where proposed rehabilitation material was used.
 - a. Include vertical feet of manhole rehabilitated. Manhole identification number, work order number, Contract number, Contractor's name, operator's contact information, and date of readings.
- J. Safety plan for steam curing of cured-in-place bag liners.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- K. For manhole process involving materials that cure in field as component of their installation.
 - 1. Provide ASTM certified lab test results for field installations completed in United States over the past two years.
 - a. In place properties for actual field installations for proposed materials.
 - b. Test results must verify physical properties specified herein have been achieved in previous field applications.
- L. Detailed description of field testing processes and procedures.
 - 1. Keep accurate record of work for each manhole rehabilitated under this contract.
 - a. Show manhole identification number and location, quantities of rehabilitation material used, estimate of infiltration eliminated, and results of post-rehabilitation inspection.
 - 2. DVD-ROM with Color video inspection reports and all digital records (original inspection videos, photographic stills, etc.) made following manhole rehabilitation.
 - a. Provide to County Project Manager within 10 days
 - 3. Curing logs: Show material curing readings per unit of time collected during material installation.
 - a. Store electronically on data logger. Submit printed copy with Pre and Post video inspection DVD-ROM.
 - 4. For CIP liners, provide tabulation of time versus temperature by liner manufacturer with lengths of time exposed portions of liner will endure without self-initiated cure or other deterioration.
 - a. Tabulate at 5 degrees F. increments, ranging from 70 degrees F. to 100 degrees F.
 - b. Include analysis of progressive effects of such self-initiated cure on insertion and cured properties of liner.
 - 5. Material testing report complete with samples, tests done, results and Analyst signature.
 - a. Third party testing as defined in ASTM or equivalent accredited materials testing firm with no financial or directorial link to manufacturer or Contractor. .
- 5.3 Information on seals and grouts.
- 5.4 Sample Resident Notification Letter for residents, for approval by the County.
- 5.5 Records, DVD's/ photos documenting manhole cleaning and television inspection work.
- 5.6 A description of methods for avoiding sewer stoppage during installation and plans for protecting existing sewers including downstream sewers that have previously been lined.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- 5.7 Actual resin volume used, and test results of infrared spectrum analyses conducted on each lot of resin.
- 5.8 Product specifications for lubricant, if necessary.
- 5.9 Notification of suspected inactive service connections.
- 5.10 Notification of any property damage.
- 5.11 Pre-Construction Video and/or photographs in digital format as approved by the County. Video to document all pre-existing conditions at the site within the limits of construction and all areas impacted by contractor operations. Video to provide means to determine time of recording and location. Video will be submitted and approved prior to the start of any work. Additionally, progress video and/or photographs will be taken during work activities which alter conditions in the field and when the work is complete. Video and/or photographs are to be provided weekly and when directed by the County at no additional costs. They shall include pre-existing damage for reference during restoration operations.
- 5.12 Updated list of Punch List Items.
- 5.13 Documentation of "Criminal History" background check
- 5.14 Written permission from landowners to use privately owned land to store materials and/or equipment.
- 5.15 Copies of all permits obtained by the Contractor.
- 5.16 Detailed sewer by-pass pumping plan in accordance with Sections 16.11 Maintenance of Sewage Flows of the TECHNICAL SPECIFICATIONS PART A.
- 5.17 Compaction Test Reports: Submit reports for each location of field compaction test. Reports shall include results of field density tests, moisture content, and degree of compaction (if excavation required).
- 5.18 Letter to designate the Contractor's representative on-site.
- 5.19 Materials and method to construct stream crossings and temporary roadways to access the work. Construction of these items to meet requirements of the Fairfax County Public Facilities Manual, VDOT and pertinent jurisdictional requirements.
- 5.20 Certified test reports to demonstrate compliance of the proposed material with the specified ASTM standards and requirements set forth in the Contract Documents.
 - A. Certified copies of all test reports on the properties of materials used and or samples taken in connection with manhole rehabilitation work shall be submitted to Fairfax County. Results of additional product testing(s), normally performed for "in-house quality control" and process improvement, shall also be provided to the County, at no cost to the County. The Contractor shall provide Fairfax County in writing, the name and designation of all in-house quality control test(s) and the sampling frequency of the tests on the resin and liner materials. Fairfax County shall also have the right to require the testing to be done at designated liner location(s) within the scope of the Contract.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- B. The Contractor shall insure that all samples for testing are labeled prior to shipment. The County may also inspect and/or request testing by an independent laboratory at no additional cost to the Contractor

- 5.21 A description of methods for protecting existing sewers including downstream sewers that have previously been lined.

6. QUALITY ASSURANCE:

- 6.1 Follow national standards and as specified herein.
- 6.2 Personnel involved in the installation of manhole rehabilitation materials: Certified by manufacturer successfully completed training in handling, applying and finishing materials used.
- 6.3 Materials, rejected after delivery, shall be marked for identification and removed from the job immediately after the determination at no Cost to the County
- 6.4 Commercially Proven Product:
- A. Successfully completed over period of at least 2 years, minimum of 1,000 vertical feet of manhole rehabilitation or 100 manholes.
1. Document to the satisfaction of the County

7. DELIVERY, STORAGE AND HANDLING:

- 7.1 Protect, store, and handle materials during transportation and delivery, while stored on-site, and during installation following approved submittals.
- A. Maintain temperature less than 120 degrees F. while in storage.
- B. The County may inspect and test materials at factory, before delivery to site or while in storage.
- 7.2 Material found to be defective or damaged due to manufacture or shipment:
- A. When the County deems repairable: Repair following manufacturer's recommendations.
- B. When the County Project Manager deems not repairable: Rejected, removed from Contract site, and replaced under the County Project Manager's direction.
- 7.3 Repair or replacement of defective or damaged material will be at no additional cost to the County.

8. WARRANTY:

- 8.1 All manhole rehabilitation will be guaranteed by the Contractor and manufacturer. The warranty period will be a minimum of one year or as provided by the manufacturer of the product, whichever is longer, from the date of acceptance (defined as final payment). During this period, all defects discovered in the work or workmanship, as determined by the County, shall be repaired or removed and replaced in a satisfactory manner at no cost to the County.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- 8.2 All work and parts provided under this contract shall carry a warranty from the date of final acceptance that guarantee and protect the County against any latent defects, design, materials, workmanship, installation, fraud, or such gross mistakes, as may amount to fraud.
- 8.3 When defective work and/or materials are found during the warranty period, the County's Project Manager shall notify the Contractor, in writing, and the Contractor shall respond within seven (7) days of the notification. Upon receipt of notice from the County of failure of any item, appurtenance thereto, or signs of deterioration during the warranty period, the Contractor shall promptly adjust, repair, or furnish, and install necessary replacement parts of design, workmanship, materials approved by the County at the Contractor's expense.
- 8.4 Conduct visual Warranty Inspection prior to expiration of warranty to determine integrity of rehabilitation materials and water-tightness.
 - A. Complete post inspection during first high groundwater period (spring or fall) following acceptance of work.
 - B. Joint inspection to be conducted with County and Contractor in attendance.
 - C. Inspect 25% of manholes rehabilitated at locations selected by the County.
 - 1. Infiltration and Inflow: NONE
 - 2. Structural Repair: Sound
 - 3. If more than one manhole fails warranty inspection, inspect all manholes with similar characteristics.
 - 4. Repair defects accordance with Warranty.

9. PRODUCTS:

9.1 Materials

- A. Acrylic or Acrylate Base Grout for non-structural infiltration control: Follow ASTM F2414 and as specified herein.
 - 1. Two-part chemical grout mixed at point of injection.
 - 2. Minimum 25 percent acrylic or acrylate base material by volume.
 - a) To increase strength or offset dilution during injection County Project Manager..
 - 3. Controllable reaction time: 30 seconds to 1 hour.
 - 4. Viscosity: 1.5 centipoises water.
 - a) May be increased maximum of 2.5 centipoises water as directed by the County.
 - b) Remain constant throughout injection period.
 - 5. Tolerates dilution and reacts in moving water.
 - 6. Final reaction:
 - a) Produces chemically, continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
 - b) Produces stabilized soil in ground that will not become brittle or rigid.
 - 7. Gel does not bleed water under stress.
 - 8. Dehydrated gel returns to 90 percent of its original volume and form after prolonged period of low ground water.
 - 9. Do not use catalyst containing dimethyl amino propionitrile (DMAPM).

TECHNICAL SPECIFICATION PART B
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10. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes or laterals.
 - a) Change dye color to confirm root inhibited grout is being injected.
11. Use latex additive for increased tensile strength.
12. Tinted to allow detection of grout in drill holes or at leakage locations.
13. Approved Manufacturers.
 - a) Grout.
 1. Avanti International, Acrylic Gel.
 - 8.5 Additives
 - 1.11 AV-101 Catalyst T+
 - 1.12 AV-103 Catalyst SP
 - 1.13 AC50W-Root Inhibitor
 - 1.14 AC-257 Icoset
 2. De Neef, Inc
 - 2.1 AC400 Acrylate Grout
 - 2.11 Additives
 - 2.111 TE 300 Triethanolamine
 - 2.112 P200 Sodium Persulfate
 3. Or Equal

B. Urethane Base Grout for non-structural infiltration control: Follow ASTM F2414 and as specified herein

1. Ratio: One part urethane prepolymer to 10 parts water by volume (10 to 50 percent prepolymer).
2. Liquid prepolymer:
 - a) Solids content: 77 to 83 percent.
 - b) Specific Gravity: 1.04
 - c) Flash Point: 20 degrees F.
 - d) Viscosity: 200 to 1,200 centipoises water at 70 degrees F.
3. Water for reacting prepolymer: pH of 5 to 9.
4. Use manufacturer recommended gel control agent to control cure time as required.
5. Final Reaction:
 - a) Produces chemically continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
 - b) Produces stabilized soil in ground that will not become brittle or rigid.
6. Dehydrated gel returns to 90 percent of its original volume and form after prolonged period of low ground water.
7. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes, or laterals.
8. Use latex additive for increased tensile strength.
9. Tinted to allow detection of grout in drill holes or at leakage locations
10. Approved Manufacturers.
 - a) Warren Environmental, Inc.
 1. SG-201 Grout

TECHNICAL SPECIFICATION PART B
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- b) Avanti
 - 1. Norosac AC 50W Root Inhibitor.
 - 2. AV-254 Gelseal.
 - 2.1 Additives
 - 2.11 AV-257 Icoset
 - 2.12 AV-255G Grout Side Accelerator
- c) De Neef, Inc.
 - 1. Hydro Active Multigel NF
 - 1.1 Additives
 - 1.11 Flexgel Cat Water Side Accelerant.
 - 1.12 Reinforcing Agent.
- d) Sauereisen.
 - 1. F370, Hydroactive Polyurethane Grout.
- e) Or Equal

C. Cementitious Reconstruction for Manhole Restoration

- 1. Quick setting (under 20 minutes), high strength, sulfide resistant, calcium aluminate-based or portland cement material.
- 2. Suitable for troweling or rotary spray application to inside of manhole.
- 3. Use additives to increase corrosion resistance or bond strength at manufacturer's direction and with County Project Manager's approval.
- 4. Initial set time per manufacturer's recommendation and per project conditions.
- 5. Density when applied: 135 lb/cf +/- 5 lb/cf.
- 6. Compressive strength (ASTM C109) at 1 day.
 - a) Per manufacturer's recommendation.
 - b) Minimum acceptable: 2,000 psi.
- 7. Compressive strength (ASTM C109) at 28 days.
 - a) Per manufacturer's recommendation.
 - b) Minimum acceptable: 5,500 psi.
- 8. Bond Strength (ASTM C882) at 28 days.
 - a) Per manufacturer's recommendation.
 - b) Minimum acceptable: 1,640 psi.
- 9. Flexural Strength (ASTM C78) at 28 days.
 - a) Per manufacturer's recommendation.
 - b) Minimum acceptable: 1,500 psi.
- 10. Shrinkage (ASTM C596) at 28 days: 0 percent.
- 11. Approved Manufacturers.
 - a) IPA systems, Inc.
 - 1. Octocrete (trowel).
 - 2. Drycon (brush or trowel) (Non-Structural Application only).
 - 3. Drycon SM (spray gun).
 - 4. Drycon SMF fiber reinforced.

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- b) The Strong Company, Inc.
 - 1. Strong-Seal MS-2A.
 - 2. Strong-Seal MS-2C (mild corrosion resistance).
 - 3. Strong-Seal High Performance (high corrosion resistance).
 - c) AP/M Permaform.
 - 1. Permacast MS-10,000 (corrosion resistant).
 - 2. Permacast MS-10,000 with Con-Shield (anti-bacterial additive).
 - 3. Permacast CR-9,000 (calcium aluminate cement) (trowel).
 - d) Sauereisen.
 - 1. F-120 Underlayment (calcium aluminate cement) (trowel).
 - 2. F-120 FC Fast Setting Underlayment.
 - 3. F-121 Substrate Resurfacer.
 - e) QuadEx
 - 1. Aluminaliner (calcium aluminum cement).
 - f) WBE Dorcas, Inc.
 - 1. Dinjer CMS 10K-A
 - g) Or Equal
- D. Hydraulic Water Plugs for non-structural infiltration control.
- 1. Rapid setting to plug active leaks prior to other rehabilitation work.
 - 2. Initial Set Time at 70 degrees F: 60 to 90 seconds.
 - 3. Final Set Time at 70 degrees F: One hour.
 - 4. Compressive Strength (ASTM C109) at 28 days:
 - a) Per manufacturer's recommendation.
 - b) Minimum acceptable "or equal" products: 4,000 psi.
 - 5. Length Change (ASTM C157): 0 percent.
 - 6. Approved Manufacturers.
 - a) Sauereisen.
 - 1. Instaplug F-180.
 - b) IPA Systems, Inc.
 - 1. Octoplug Plus.
 - 2. IPANEX Rapid.
 - c) The Strong Company, Inc.
 - 1. Strong-Seal QSR (acid resistant)
 - 2. Strong-Plug.
 - d) AP/M Permaform,
 - 1. Permacast-Plug.
 - e) Quadex.
 - 1. Quad-Plug.
 - f) WBE Dorcas, Inc., Colorado Springs, CO.
 - 1. Dinjer Stop Leak Ultra – Rapid Setting Repair Material.
 - g) Or Equal.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

- E. Oil-free Oakum Water Plugs for non-structural infiltration control
1. Rapid setting oil-free oakum and hydrophilic grout to plug active water leaks prior to other rehabilitation work
 2. Oil-free oakum meeting Federal Specification HH-P-117.
 3. Two-part urethane resin.
 4. Initial set time: 5 to 10 seconds.
 - a) Use accelerator to decrease initial set time.
 5. Approved Manufacturers.
 - a) Avanti International
 1. Oil-free Oakum (AV-219)
 2. Multigrout (AV-202).
 - b) DeNeef, Inc.
 1. Oil-free Oakum
 2. Hydro Active Sealfoam
 3. Hydro Active Flex LV grout.
 6. Or Equal.
- F. Manhole Chimney Seals.
1. Cured in Place Chimney Liner.
 - a) Seamless tube liner formed in place within existing manhole, beginning just below cover seat extending downward maximum of 24 vertical inches.
 - b) Structurally independent of existing manhole structure.
 - c) Resin impregnation method: On site.
 - d) Resin-Catalyst-Colorant Additive Mixture:
 1. Tested to certify design standards are met before impregnating felt material.
 2. Quantity of resin used for tube impregnation: Sufficient to fill volume of air voids in felt tube with additional allowances for polymerization Shrinkage and loss of resin through cracks and irregularities in manhole wall.
 - e) Seams in felt tube.
 - f) Cured Liner.
 1. 50-year life span.
 2. Chemically resistant to internal exposure to sewage containing small quantities of hydrogen sulfide, carbon dioxide, methane, mercaptans, kerosene, moisture and diluted sulfuric acid.
 3. Chemically and physically resistant to external exposure of soil bacteria, moisture, roots and chemical attack, this may be due to material in surrounding ground.
 - g) Approved Manufacturers.
 1. Cured In Place Liner
 - 1.1 LMK
 - 1.2 CIPMH Chimney
 - 1.3 Or Equal

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

G. Manhole Liners.

1. Cured-in-Place Bag Liners.
 - a) Seamless manhole formed in place, within existing manhole extending from channel to frame.
 1. Structurally independent of existing manhole structure.
 2. Liner thickness: Designed by manufacturer related to location, loads, water table and condition of manhole.
 - b) Multiple structural layers of fiberglass with non-porous membrane layer between fiberglass or Polyvinyl Chloride/Polyester (PVCP) liner
 1. Fiberglass layer formed to manhole interior under pressure and cured with heat.
 - c) Liner fabricated to match manhole dimensions for custom fit.
 1. Continuous length from bench to manhole frame, just below cover seat
 - 1.1 Pieced together length: Not acceptable
 - 1.2 Separate lining allowed for channel: Compatible with bag liner.
 2. Stencil material type and name on liner: Viewable from inside.
 - d) Epoxy resin
 1. Polyamide Bisphenol "A" Epichlorodhydrin for use with fiberglass liner.
 2. Modified epoxy resin for use with PVCP liner.
 - e) Approved Manufacturers.
 1. Terre-Hill.
 - 1.1 Multi-Plexx Liner System.
 2. Poly-Triplex Technologies.
 - 2.1 Poly Triplex Liner System.
 3. Or Equal
2. Spray on Epoxy Liners.
 - a) Seamless manhole formed in place, within existing manhole extending from channel to frame.
 - b) Two or three part epoxy coating.
 - c) Existing wall preparation: Follow manufacturer's recommendations.
 - d) Thickness:
 1. Structurally independent of existing manhole structure or sufficient to form protective barrier when used with Cementitious Manhole Restoration.
 2. Designed by manufacturer related to location, loads, water table and condition of manhole.
 - e) Minimum Tensile Strength (ASTM C307): 2,500 psi.
 - f) Minimum Flexural Strength (ASTM C580): 4,600 psi.

TECHNICAL SPECIFICATION PART B
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- g) Approved Manufacturers.
 - 1. Sauereisen
 - 1.1 Sewer Gard No. 210 Sprayable.
 - 1.2 Sewer Gard No. 210 Rotary Spray.
 - 1.3 Sewer Gard No. 210G
 - 1.4 Sewer Gard No. 210 FS
 - 1.5 Hi-Build Filler Compound No. 209HB
 - 2. Raven
 - 2.1 Raven 405
 - 3. Terre Hill.
 - 3.1. Hydropoxy
 - 4. AP/M Permaform.
 - 4.1 Cor+Gard
 - 5. SprayRog, Inc.
 - 5.1 SR6100.
 - 5.2 SprayWall
 - 6. Warren Environmental, Inc.
 - 6.1 S-301-14 Epoxy Spray System.
 - 6.2 M-301-18 Epoxy Trowel-On Mastic System.
 - 6.3 S-301-20 Thermaflex
 - 6.4 SG-201 Injection Grout
 - 7. WBE Dorcas, Inc., Colorado Springs, CO
 - 7.1 Dinjer SG Mastic – Two Part Epoxy.
 - 8. Or Equal.
- 3. Panel Liners.
 - a) Seamless manhole formed in place within existing manhole, extending from channel to frame
 - 1. Structurally independent of existing manhole structure.
 - b) High density Polyethylene (HDPE) Panels.
 - 1. Integrally extruded sheets with anchoring studs, minimum 39 studs per square foot.
 - 2. Minimum thickness of panel sheet with anchoring studs: 2 mm.
 - 3. Minimum thickness of flat liner sheet at joint overlaps: 3 mm.
 - 4. Joints between panels sealed using thermal welding.
 - 5. Density (ASTM D792): 0.945 gm/cm³.
 - 6. Elongation at break (ASTM D638): Greater than 400 percent.
 - 7. Minimum abrasion resistance (ASTM D4833): 160 pounds.
 - 8. Steel frames for mounting liner.
 - 8.1 Maintain minimum 2.5 inch annular space when filling with flowable concrete. Required thickness dependent on condition of manhole, location of manhole, loads applied to manhole and water table.
 - 8.2 Maintain minimum 1 inch annular space when filling with grout.
 - 8.3 Anchor bolts: Minimum penetration of concrete on manhole wall: 1.5 inches.
 - 8.4 Countersink screws to mount liner to frames.
 - 9. Cement in annular space.
 - 9.1 Wall preparation: Determined prior to placement of forms.
 - 9.2 Minimum Compressive Strength: 4,000 psi at 28 days.
 - 9.3 Minimum aggregate size: 8 mm.
 - 9.4 Maximum aggregate size: 32 mm.

TECHNICAL SPECIFICATION PART B
MANHOLE REHABILITATION

10. Grout in annular space.
 - 10.1 Minimum Compressive Strength: 6,000 psi at 28 days.
 - 10.2 Low viscosity, high flow ability to fill annular space without voids.
 - 10.3 Bonds to manhole wall.
11. Approved Manufacturer.
 - 11.1 AGRU
 - 11.11 Sure Grip Concrete Protective Liner
 - 11.2 Or Equal.
- c) Polyvinyl Chloride (PVC) Panels.
 1. Resin: Minimum 99 percent PVC by weight.
 2. Do not use copolymer resins or recycled materials.
 3. Minimum thickness: 1.65 mm, with integrally extruded anchoring extensions on maximum 2 inch center and minimum ¼ inch deep.
 4. Joints between panels sealed using thermal welding.
 5. Minimum Tensile Strength (ASTM C307): 2,200 psi
 6. Maximum Elongation at Break (ASTM D638): 200 percent of original.
 7. Mastic primer and two-part mastic to bond panels to manhole walls.
 8. Approved Manufacturers.
 - 8.1 Ameron
 - 8.11 Arrow-Lock
 - 8.2 Or Equal
4. Cast in Place Panel Liners.
 - a) Seamless manhole formed in place within existing manhole, extending from channel to frame
 1. Structurally independent of existing manhole structure.
 2. Existing wall preparation as recommended by manufacturer
 - b) Concrete
 1. Type I/II Portland cement concrete.
 2. Non-Shrink.
 3. Corrosive resistant.
 4. Maximum Aggregate Size: 5/8 inch.
 5. Fiber reinforcement and plasticizers to produce minimum compressive strength of 4,000 psi at 28 days.
 - c) Formwork
 1. Segmented forms in cylindrical and conical sections.
 2. Provide adequate annular space for concrete.
 3. Result in minimum finished manhole opening of 20 inches.
 4. Sealed at bench and pipe openings to form water stop.
 5. Removable from within newly cast in place manhole.
 - d) As specified, provide PVC or polyethylene panels for cast in place wall surface
 1. Minimum thickness: 0.065 inch.
 2. Ribbed or studded for embedment into concrete.
 - 2.1 Minimum pull out strength: 100 pounds per linear inch.
 3. Fit securely to exterior of concrete forms.
 4. Joints between panels sealed using Heat fusion or thermal welding.

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- e) Approved Manufacturers.
 - 1. AP/M Permaform
 - 1.1 Permaform Liner.
 - 1.2 Permaform with Con-Shield (anti-bacterial additive).
 - 2. Or Equal
 - 5. Spray on Polyurethane Liners.
 - a) Seamless manhole formed in place, within existing manhole extending from channel to frame.
 - b) Two part 100% WOC-free self-priming polyurethane lining.
 - c) Thickness:
 - 1. Dependent to manhole location, loads, water table, and condition of manhole.
 - 2. Structurally independent of existing manhole structure, minimum 1/10 of an inch (100mils)
 - d) Minimum Tensile Strength (ASTM D638): 7,450 psi.
 - e) Minimum Compressive Strength (ASTM D695): 18,000 psi.
 - f) Approved Manufacturers.
 - 1. SprayRoq Inc.
 - 1.1 SprayWall
 - 1.2 SprayShield Green II
 - 2. Or Equal.
 - H. Precast Manholes: For full or partial replacement follow the Fairfax County Public Facilities Manual
 - I. Manhole Frames and Covers: For full or partial replacement follow the Fairfax County Public Facilities Manual
- 9.2 Samples - Inspection and Testing
- A. At no additional cost to the County, the Contractor will obtain samples and test them in accordance with appropriate ASTM Standards and Manufacturer's recommendations and provide documentation in order to verify conformance to all requirements.
 - 1. Follow manufactures recommendations for Quality assurance and installation testing.
 - 2. Catalog, track and/or otherwise provide means to document origin of samples being tested.
 - 3. Provide documentation within time restraints prescribed by ASTM Industry standards and/or the Manufacturer. In the event of discrepancies in the requirements for when to submit results, order of precedence will be as follows; Federal Specifications, ASTM, Product Manufacturer, when time requirements are not available, results shall be provided within 15 business days.
 - 4. In advance of the work, verify required testing is performed by approved laboratory

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5. Visual Inspection: Determine integrity of rehabilitation materials and water-tightness
 - a. Verify no inflow or infiltration
 - b. Verify services are reinstated and unobstructed
6. Manhole Lining: Test for continuity following ASTM D4787 and approved submittals.
 - a. Conduct holiday test and gauge depth test on spray liners
 - b. Perform CCTV inspection of liner following Technical Specifications part A and B of this document to confirm proper installation to the satisfaction of the County
 - c. Conduct pull test with embedded bolt or tab
 - d. Repair holes and discontinuities following manufacturer's recommendations
7. Grout and Concrete: Test Concrete for compressive strength following ASTM C109

10 EXECUTION:

- 10.1 The Contractor is solely responsible for the means, methods, techniques, sequences, procedures of the work and meeting safety requirements. The Contractor shall designate in writing the person who shall act as the Contractor's representative on the site. The representative shall have a thorough understanding of the contract documents and shall have previous experience in the type of work being performed. The representative shall be able to communicate in fluent English with full authority to act on behalf of the Contractor. All communications given to the representative shall be as binding as if given to the Contractor. The representative will be present on the site at all times when the work is in progress as required to perform adequate supervision and coordination of the Work as determined by the County
- 10.2 Care must be taken to insure that styrene levels are below USEPA standards for airborne, surface, and water contamination.
- 10.3 Sewer Bypass Plan following Technical Specifications Part A, paragraph 16.11 Maintenance of Sewage Flows.
- 10.4 The Contractor will provide all equipment required to install manhole rehabilitation product and install it in accordance with the manufacturer's standard procedures and pertinent Standards to produce a structurally sound manhole. Any product that is not installed within the proposed time frame of installation or the manufacturer's instructions will be removed from site at no additional cost to the County.
- 10.5 A Resident Notification Letter, 2-sided (1 side English, 1 side Spanish), shall be provided by the Contractor and approved by the County. The Contractor shall deliver the notification letter to each residence affected by the installation process a minimum of seven (7) business days prior to starting the project. The Resident Notification Letter shall be hand delivered or mailed to each affected resident prior to lining. At a minimum, hand-delivered letters will be placed on the Front, Side, and/or Garage doors of residents. Preferably, the letters will be delivered directly to the resident whenever possible.
- 10.6 Residents are to be informed of when wastewater and/or water service interruption will take place and its duration, if any. The Contractor is required to have an established public relations program. Upon request, the Contractor will provide documentation of the employee training focused on this relations program.

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- 10.7 The Contractor is required to be on site no later than 7:30 a.m. with all necessary equipment in working order. No work, unless required by an emergency and authorized by the County, will be performed on weekends and holidays.
- 10.8 The County may issue work in phases. Should the County elect to issue a new phase of work the Contractor may not pursue the new work unless the Contractor can demonstrate work in the prior phase is being completed to the satisfaction of the County. Should the Contractor not meet this requirement the County may stop work on the new phase until the prior phase is completed, at no additional cost to the County. The Contractor will only be compensated at the prices listed in the pricing schedule for work the completed as directed.
- 10.9 Work performed shall be in accordance with local, state, and federal standards and requirements. Safety and maintenance of traffic are the responsibility of the Contractor.
- 10.10 The Contractor shall conduct work to ensure the least possible obstruction to traffic and inconvenience to the County, general public, and residents in the vicinity of the Work, and to ensure protection of persons and property.
- 10.11 The Contractor shall coordinate his work with all ongoing construction activities in connection to the work. This includes sewer rehabilitation contractors, by-pass contractors and other contractors as needed at no additional cost to Fairfax County.
- 10.12 Manhole Preparation: Following approved submittals for rehabilitation products used.
- A. Divert flow from channel.
 - B. Prevent extraneous material from entering sewer lines during cleaning rehab work.
 - 1. Filter solids-laden water through an approved de-silting device. No material shall be allowed to go downstream.
 - C. Clean interior surface of manhole of debris, dirt, oil, grease, remains of old coating materials, and any other extraneous materials.
 - D. Pressure wash interior of manholes to remove loose mortar, concrete, and debris.
 - E. Repair irregularities and missing material in manhole forming smooth surface.
 - F. Stop leakage into manhole.
- 10.13 Chemical Grouting for Leakage Control.
- A. Provide 48-hour notice to County Project Manager prior to start of work for equipment inspection and testing.
 - 1. Allow measurements to be taken.
 - 2. Demonstrate acceptable grout volumetric measuring technique.
 - B. Adjust chemical mixing ratios required for specific application.
 - 1. Minimum gel time 30 seconds.
 - C. Do not block pipes entering/exiting manhole with grout.
 - 1. Use mirror or camera to confirm pipes are not blocked.
 - D. Do not damage manhole structure during operations.
 - 1. Repair damage as directed by County.
 - E. Protect area of manhole below repair work.
 - 1. Do not allow solid material to enter sewage flow.
 - 2. Remove protective devices as soon as practical.

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- F. Manhole Sealing: Follow ASTM F2414 and as specified herein.
1. Brick Manholes
 - a. Drill only the amount of holes necessary to stop leakage following industry standards and chemical grout manufacturer's recommendations.
 1. Do not use curtain of grout sealing method.
 - b. Proceed with manhole reconstruction using reconstruction processes specified herein.
 2. Precast Manhole
 - a. Seal pipe connections as specified by drilling between pipe and manhole opening and injecting grout
 - b. When specified, sewer precast manhole base by drilling holes at leakage points along bench to wall and in channel.
 - c. At precast joints, inject grout through holes drilled at leaking joint.
 3. Hydraulic Water Plugs: Follow approved submittals
 - a. Provide mechanical key by undercutting or square cutting opening and removing loose materials
 - b. Mix handle and cure material
 - c. Finish surface as required for other rehabilitation work.
 4. Oil-Free Oakum Water Plugs: Following approved submittals
 - a. Saturate oakum with resin
 1. Use additives as required
 - b. Place, pack and cure material

10.14 Manhole Rehabilitation

- A. Locate Existing Manhole.
 1. Using available records, drawings, land surveying, GPS, metal detectors or other technology and techniques, locate, excavate, and expose existing manhole.
- B. Reset/Replace and Adjust manhole frame and cover: Following Fairfax County Public Facilities Manual and Standard Drawings (Plates).
- C. Chemical Grouting: As specified herein, following ASTM F2414 and specified herein.
- D. Manhole Chimney Seals: Following approved submittals.
 1. Provide smooth circular surface following manufacturer's requirements.
 - a. Install following Fairfax County Public Facilities Manual and Standard Drawings (Plates)
 - b. Realign manhole frame and cover if required and as specified herein.
 2. Mix, handle, and apply material.
- E. Cementitious Reconstruction: Following approved submittals and as specified herein:
 1. Mix and handle materials.
 2. Apply materials using rotary spray equipment or spray gun.
 3. Apply beginning at bottom of brickwork and work up to bottom of frame.
 - a. Seal around pipe connections and steps.

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4. Do not allow material to enter sewage flow.
5. Apply.
 - a. Maximum applied thickness: 300 mils.
 - b. Minimum applied thickness: 150 mils.
 - c. Confirm with pictures and gauge.
6. Trowel and brush for smooth finish.
7. Cure using curing compound when recommended by manufacturer.
 - a. Do not allow flow in manhole or traffic over manhole, until manufacturer's minimum cure times have been achieved.

F. MANHOLE LINERS: Following approved submittals.

1. Cured in Place Liners.
 - a. Custom fabricate liner to individual manhole dimensions
 - b. Line bench and channel area with compatible epoxy or resin material placed in bottom of manhole. Extend minimum 6 inches up manhole wall.
 - c. Remove manhole steps.
 - d. Saturate liner with resin, place in manhole, pressurize with air or water and cure with hot water, steam or hot air.
 - e. Finish liner.
 - f. Finished liner: Forms monolithic structure from manhole frame to bench.
2. Epoxy Liners.
 - a. Mix and apply material.
 1. Sagging of material is not permitted.
 - b. Seal around pipe connections and steps.
 - c. Cure.
 - d. Finished liner: Forms monolithic structure from manhole frame to channel.
3. Panel Liners.
 - a. Remove manhole steps.
 - b. Place pipe extensions in manhole at main line and pipes entering manhole as required.
 - c. Insert liner and attach to wall using supports.
 1. Apply bonding agent compatible with grout or concrete to manhole wall before placing liner.
 2. Provide adequate annular space between liner sheet and manhole wall to allow placement of concrete or grout.
 3. Secure liner supports to manhole walls.
 4. Secure liner to supports.
 5. Form liner seams.
 6. Place concrete or grout with no wrinkling of liner.
 - 6.1 Vibrate to prevent voids.
 7. After curing remove internal forms or supports.
 8. Finish seams.
 - d. Liner Attached to Wall Using Mastic.
 1. Apply mastic primer to manhole wall and cure.
 2. Apply mastic to primed manhole wall.

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3. Apply liner to mastic.
 - 3.1 Embed anchoring extensions in mastic.
 - 3.2 Wrinkling of liner not permitted.
 4. Finish liner seams.
 5. Finished liner: Forms monolithic structure from manhole frame to channel.
4. Cast in Place Panel Liner.
- a. Remove manhole steps.
 - b. Erect internal forms.
 1. Place PVC or PE liner with forms when specified.
 2. Seal forms at bench to prevent concrete leakage.
 - c. Place concrete to prevent segregation of aggregate and cement.
 - d. Consolidate concrete to fill pockets, seams, and cracks in existing manhole wall.
 - e. Remove formwork when concrete is cured.
 - f. Finish liner seams.
 - g. Seal concrete liner at frame and pipe penetrations.
 - h. Cured liner: Forms monolithic structure from manhole frame to channel.
- G. Trim and seal incoming laterals and pipes.
- H. Remove all construction and cleaning debris from site and dispose of properly at certified waste disposal facility.
- I. Replace or install manhole Following Fairfax County Public Facilities Manual and Standard Drawings (Plates).

10.15 Installation of Odor Control Vent Valves

- A. After the completion of the sewer manhole and pipe rehabilitation on this project, the County will determine locations suitable for the installation of Odor Control Vent Valves. These Odor Control Vent Valves will be installed at 4 locations where rehabilitation under this contract caused sewer odors. The locations will be selected which are the most effective in removing the sewer odors. Installations can occur from manhole 110-2-144, the manhole at the upper reach of the project to manhole 110-1-211, located approximately 13,000 feet down flow from the last manhole rehabilitated on this contract (110-1-059).
- B. Requirements and Specifications for constructing Odor Control Vent Valves can be found in Appendix F.

10.16 Clean-Up

- A. The Contractor shall keep the work area in a neat and orderly condition by frequent removal of debris. Upon completion of the lining process at each location, all debris, unused material, equipment, hoses, etc. shall be promptly removed from the area. The area will be left in a condition similar to, or better than, before the work was performed.

TECHNICAL SPECIFICATION PART B
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10.17 Property Damage

- A. Any damage to the County's infrastructure, private property, or other public property (homeowner backups, dead grass, ruts, damaged pavement, concrete, fences, etc.) will be immediately repaired or rehabilitated to the County's satisfaction at no additional expense to the County or property owner(s) in question. The property owner(s) and/or the County will be notified of the problem and the repair method. The Contractor must expedite the insurance process and take responsibility of all applicable clean up, replacement of materials, and/or repair to residences. All repair work must be completed to the satisfaction of the County or Homeowner(s).
- B. Upon award of the contract, the Contractor must have a Landscape contractor and a Plumbing contractor to address any concerns by the Homeowners caused by the lining process.
- C. In the event of a backup, the Contractor shall have a certified laboratory available for performing bacteria testing for residents when all backups occur or other fecal matter issues arise at no cost to the County or its residents
- D. In the event of a backup all work performed by the Contractor must be in accordance with the guides for Professional Water Damage Restoration (IICRC S500) and Professional Mold Remediation (IICRC S520), unless otherwise stated. The Contractor is to have one-person onsite that is certified in accordance with the guides for Professional Water Damage Restoration (IICRC S500) and Professional Mold Remediation (IICRC S520) at no cost to the County or the Homeowner. The Contractor shall submit a Written Summary of each sewage back up with details of: what caused it, content of the damage, what was done, and a remedy to prevent a reoccurrence to the County's Project Manager within two (2) business days.

10.18 Punch List Items

- A. The Contractor must correct any problems found within 60 business days of discovery. If a problem is not corrected within 60 business days, then the County will charge the Contractor a penalty of \$100.00 per business day. The Contractor shall maintain an updated list of Punch List Items and submit it to the County once a week.
- B. The Contractor shall be physically and financially able to keep all "Punch List Items" caught up in the phase they are working. All punch list items will be completed before the next phase of work can be started, with 90% of the current phase work approved for payment.

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11 INVOICES AND PAYMENT

11.1 The Contractor shall submit with his request for payment, the specific details of the Manhole rehabilitation work on CD or by email. A copy of required testing and confirmation of proper installation will be included with each invoice. If the required information is found to be incomplete, then payment for the work will not be made and the request will be rejected. In addition to contractor and contract identification, the payment request shall include the following as a minimum:

1. Line segment identification and location;
2. Sample identification(s) and technician;
3. Installation (in sewer) date;
4. Manhole diameter;
5. Liner or coating thickness;
6. Liner and resin batch numbers;
7. Other required Manufacturer information, lab-testing results, and/or ASTM Data as it pertains to the product utilized for Manhole rehabilitation.

11.2 Draft and Final Invoice requirements, for each invoice include:

1. Contractor name and address
2. Invoice number and PO Number
3. Invoice date and date of each manhole rehabilitation
4. Year and phase of work
5. Grid and manhole numbers
6. Street name for each manhole
7. Unit rates
8. Quantity installed
9. Total cost of each manhole
10. Total cost of invoice
11. Final invoice to include signature by company official who has authority to approve payments
12. Provide Pre and Post CCTV reports with each Invoice and DVD with Video
13. Provide wet out and cure reports with each Invoice
14. Clearly label and date each, report, document, pre and post CCTV to identify the correct manhole it represents.
15. Submit all invoices complete with all the required items. Partial and incomplete invoices will not be accepted and will be rejected.

11.3 The costs for work performed under Technical Specifications Part B will be included in the Lump sum price.

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COUNTY OF FAIRFAX COMMONWEALTH OF VIRGINIA

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

(Vendor: The general rules and conditions which follow apply to all purchases and become a definite part of each formal solicitation and resulting contract award issued by the DEPARTMENT OF PURCHASING & SUPPLY MANAGEMENT, unless otherwise specified. Bidders or their authorized representatives are expected to inform themselves fully as to the conditions, requirements, and specifications before submitting bids; failure to do so will be at the bidder's own risk and relief cannot be secured on the plea of error.)

Subject to all State and local laws, policies, resolutions, and regulations and all rules, regulations and limitations imposed by legislation of the Federal Government, bids on all solicitations issued by the DEPARTMENT OF PURCHASING & SUPPLY MANAGEMENT will bind bidders to applicable conditions and requirements herein set forth unless otherwise specified in the solicitation.

1. AUTHORITY -The Purchasing Agent has the sole responsibility and authority for negotiating, placing and when necessary modifying every solicitation, contract and purchase order (except for capital construction projects) issued by the County of Fairfax. In the discharge of these responsibilities, the Purchasing Agent may be assisted by assigned buyers. Unless specifically delegated by the County Purchasing Agent, no other County officer or employee is authorized to order supplies or services, enter into purchase negotiations or contracts, or in any way obligate the government of the County of Fairfax for an indebtedness. Any purchase ordered or contract made which is contrary to these provisions and authorities shall be of no effect and void and the County shall not be bound thereby.

2. DEFINITIONS-

AGENCY: Any Department, Agency, Authority, Commission, Board or other unit in the Administrative Service of the County.

BEST VALUE: As predetermined in the solicitation, means the overall combination of quality, price, and various elements of required services that in total are optimal relative to a public body's needs.

BID: The offer of a bidder to provide specific goods or services at specified prices and/or other conditions specified in the solicitation.

BIDDER/OFFEROR: Any individual, company, firm, corporation, partnership or other organization bidding on solicitations issued by the Purchasing Agent and offering to enter into contracts with the County. The term "bidder" will be used throughout this document and shall be construed to mean "offeror" where appropriate.

CONSULTANT SERVICES: Any type of services required by the County, but not furnished by its own employees, which is in its nature so unique that it should be obtained by negotiation on the basis of demonstrated competence and qualification for the type of service required and at fair and reasonable compensation, rather than by competitive sealed bidding.

CONTRACTOR: Any individual, company, firm, corporation, partnership or other organization to whom an award is made by the County.

COUNTY: County of Fairfax.

GOODS: All material, equipment, supplies, printing, and automated data processing/information technology hardware and software.

INFORMALITY: A minor defect or variation of a bid or proposal from the exact requirements of the invitation to bid or the request for proposal which does not affect the price, quality, quantity or delivery schedule for the goods, services or construction being procured.

INVITATION FOR BID (IFB): A request which is made to prospective suppliers (bidders) for their quotation on goods or services desired by the County. The issuance of an IFB will contain or incorporate by reference the specifications and contractual terms and conditions applicable to the procurement.

PROFESSIONAL SERVICES: Any type of professional service performed by an independent contractor within the practice of accounting, actuarial services, architecture, dentistry, land surveying, landscape architecture, law, medicine, optometry, pharmacy, or professional engineering (which shall be procured as set forth in the Code of Virginia §2.2-4301 in the definition of competitive negotiation at paragraph 3 (a), and in conformance with the Fairfax County Purchasing Resolution).

PURCHASING AGENT: The Purchasing Agent employed by the Board of Supervisors of Fairfax County, Virginia.

QUICK QUOTE (QQ): A method of competitive bidding for the purchase or lease of goods, non professional services or for the purchase of insurance, construction, or construction management when the estimated cost thereof shall be less the \$50,000.

REQUEST FOR PROPOSAL (RFP): A request for an offer from prospective offerors which will indicate the general terms which are sought to be procured from the offeror. The RFP will specify the evaluation factors to be used and will contain or incorporate by reference other contractual terms and conditions applicable to the procurement.

RESPONSIBLE BIDDER/OFFEROR: An individual, company, firm, corporation, partnership or other organization having the capability in all respects to perform fully the contract requirements, and also having the moral and business integrity and reliability which will assure good faith performance, and having been prequalified, if required. (Reference paragraph 24, General Conditions and Instructions to Bidders).

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

RESPONSIVE BIDDER/OFFEROR: An individual, company, firm, corporation, partnership or other organization having submitted a bid which conforms in all material respects to the invitation for bid or request for proposal.

SERVICES: Any work performed by an independent contractor wherein the service rendered does not consist primarily of acquisition of equipment or materials, or the rental of equipment, materials and supplies.

SOLICITATION: The process of notifying prospective bidders that the County wishes to receive bids on a set of requirements to provide goods or services. The notification of County requirements may consist of public advertising (newspaper, County Web Site, or other electronic notification), the mailing of Notices of Solicitation, Invitation for Bid (IFB) or Request for Proposal (RFP), the public posting of notices, issuance of an Open Market Procurement (OMP), or telephone calls to prospective bidders.

STATE: Commonwealth of Virginia.

CONDITIONS OF BIDDING

3. BID FORMS-Unless otherwise specified in the solicitation, all bids shall be submitted on the forms provided, to include the bid Cover Sheet and Pricing Schedule(s), properly signed in ink in the proper spaces and submitted in a sealed envelope or package. The item pages of the Pricing Schedule which do not include any items for which a bid is required need not be included in the submission of a bid. Should the bid prices and/or any other submissions differ on the copy of the submitted bid, the ORIGINAL copy shall prevail.

4. LATE BIDS & MODIFICATIONS OF BIDS-

- a. Any bid/modification received at the office designated in the solicitation after the exact time specified for receipt of the bid/modification is considered a late bid/modification. A late bid/modification will not be considered for award except under the following conditions only:
 1. It was sent by registered or certified mail not later than the fifth (5th) calendar date prior to the date specified for receipt of the bid/modification; or
 2. The bid/modification was sent by mail and it is determined by the County Purchasing Agent that the late receipt was due solely to mishandling by the County after receipt at the address specified in the solicitation.
- b. If an emergency or unanticipated event or closing interrupts or suspends normal County business operations so that bids cannot be received at the County office designated for receipt of bids by the exact time specified in the solicitation, the due date/time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal County business operations resume.
- c. The official time used for receipt of bids/modifications is the Bid Clerk's time and date stamp clock located in the Department of Purchasing and Supply Management. All bidders are responsible for ensuring all bids/modifications are received prior to the scheduled due date/time.
- d. A late hand-carried bid, or any other late bid not submitted by mail, shall not be considered for award.

5. WITHDRAWAL OF BIDS-

- a. A bidder for a public construction contract, other than a contract for construction or maintenance of public highways, may withdraw his or her bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. If a bid contains both clerical and judgment mistakes, a bidder may withdraw his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid which shall be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder shall give notice in writing to the Purchasing Agent of his or her claim of right to withdraw his or her bid within two (2) business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice.
- b. A bidder for a contract other than for public construction may request withdrawal of his or her bid under the following circumstances:
 1. Requests for withdrawal of bids prior to opening of such bids shall be transmitted to the County Purchasing Agent in writing.
 2. Requests for withdrawal of bids after opening of such bids but prior to award shall be transmitted to the County Purchasing Agent, in writing, accompanied by full documentation supporting the request. If the request is based on a claim of error, documentation must show the basis of the error. Such documentation may take the form of supplier quotations, vendor work sheets, etc. If bid bonds were tendered with the bid, the County may exercise its right of collection.
- c. No bid may be withdrawn under this paragraph when the result would be the awarding of the contract on another bid of the same bidder or of another bidder in which the ownership of the withdrawing bidder is more than five percent.
- d. If a bid is withdrawn under the authority of this paragraph, the lowest remaining bid shall be deemed to be the low bid.
- e. No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

- f. If the county denies the withdrawal of a bid under the provisions of this paragraph, it shall notify the bidder in writing stating the reasons for its decision and award the contract to such bidder at the bid price, provided such bidder is a responsible and responsive bidder.
- g. Work papers, documents, and materials submitted in support of a withdrawal of bids may be considered as trade secrets or proprietary information subject to the conditions of the Virginia Freedom of Information Act.
- 6. ERRORS IN BIDS**-When an error is made in extending total prices, the unit bid price will govern. Erasures in bids must be initialed by the bidder. Carelessness in quoting prices, or in preparation of bid otherwise, will not relieve the bidder. Bidders are cautioned to recheck their bids for possible error. Errors discovered after public opening cannot be corrected and the bidder will be required to perform if his or her bid is accepted.
- 7. MAILING OF BIDS** – All bids and proposals submitted in response to a Fairfax County solicitation shall be submitted in a sealed envelope or package identified with the solicitation number, title, bidder's name and address, and due date/time of opening/closing clearly marked on the outside of such envelope or package.
- 8. COMPLETENESS**-To be responsive, a bid must include all information required by the solicitation.
- 9. ACCEPTANCE OF BIDS/BINDING 90 DAYS**-Unless otherwise specified, all formal bids submitted shall be binding for ninety (90) calendar days following bid opening date, unless extended by mutual consent of all parties.
- 10. CONDITIONAL BIDS**-Conditional bids are subject to rejection in whole or in part.
- 11. BIDS FOR ALL OR PART**-Unless otherwise specified by the County Purchasing Agent or by the bidder, the Purchasing Agent reserves the right to make award on all items in the aggregate or on any of the items on an individual basis, whichever is in the best interest of the County. A bidder may restrict his or her bid to consideration in the aggregate by so stating but shall name a single unit price on each item bid. Any bid in which the bidder names a total price for all the articles without quoting a unit price for each and every separate item may not be considered for award.
- 12. AREA BIDS**-For the purchase and delivery of certain goods and services the County may be divided into Areas (e.g., Areas I, II, III, and IV). When such goods and services are included in the Pricing Schedule, bidders may bid on all areas or an individual area. A map showing the areas of the County will be furnished with the solicitation when required.
- 13. TIME FOR RECEIVING BID**-Bids received prior to the time of opening will be securely kept, unopened. The representative of the Purchasing Agent assigned to open them will decide when the specified time has arrived, and no bid received thereafter will be considered, except as provided in paragraph 4, General Conditions and Instructions to Bidders. No responsibility will attach to the Purchasing Agent or his or her representative for the premature opening of a bid not properly addressed and identified. Unless specifically authorized in the solicitation, telegraphic, electronic, or facsimile bids/modifications will not be considered.
- 14. BID OPENING**-All bids received in response to an Invitation for Bid (IFB) will be opened at the date, time and place specified, read publicly, and made available for inspection as provided in paragraph 68, General Conditions and Instructions to Bidders. Tabulations of bids received are posted on the Department of Purchasing & Supply Management Bulletin Board as well as the County's web site: <http://www.fairfaxcounty.gov/dpsm/bidtab.htm>. Proposals received in response to a Request for Proposal (RFP) will be made available as provided in paragraph 68, General Conditions and Instructions to Bidders.
- 15. OMISSIONS & DISCREPANCIES**-Any items or parts of any equipment listed in this solicitation which are not fully described or are omitted from such specification, and which are clearly necessary for the completion of such equipment and its appurtenances, shall be considered a part of such equipment although not directly specified or called for in the specifications.
- Should a bidder find discrepancies or ambiguities in, or omissions from, the solicitation, including the drawings and/or specifications, he or she shall notify the Purchasing Agent at least five (5) days prior to the date set for the opening of bids. If necessary, the Purchasing Agent will send a written addendum for clarification to all bidders no later than three (3) days before the date set for opening of bids. Notifications regarding specifications will not be considered if received within five days of the date set for opening of bids.
- 16. RESPONSE TO SOLICITATIONS**-In the event a vendor cannot submit a bid on a solicitation, he or she is requested to return the solicitation cover sheet with an explanation as to why he or she is unable to bid on these requirements.
- 17. BIDDER INTERESTED IN MORE THAN ONE BID**-If more than one bid is offered by any one party, either directly or by or in the name of his or her clerk, partner, or other persons, all such bids may be rejected. A party who has quoted prices on work, materials, or supplies to a bidder is not thereby disqualified from quoting prices to other bidders or firms submitting a bid directly for the work, materials or supplies.
- 18. TAX EXEMPTION**-The County is exempt from the payment of any federal excise or any Virginia sales tax. The price bid must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in the list price, a bidder may quote the list price and shall show separately the amount of federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the County. Fairfax County's Federal Excise Tax Exemption Number is 54-74-0127K. Contractors located outside the Commonwealth of Virginia are advised that when materials are picked up by the County at their place of business, they may charge and collect their own local/state sales tax. Materials used in the performance of construction contracts are subject to Virginia Sales/Use Tax as described in Section 630-10-27J of the Virginia Retail Sales and Use Tax Regulations.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

19. PROHIBITION AGAINST UNIFORM PRICING-The County Purchasing Agent shall encourage open and competitive bidding by all possible means and shall endeavor to obtain the maximum degree of open competition on all purchase transactions using the competitive sealed bidding, competitive negotiation, or open market methods of procurement. In submitting a bid each bidder shall, by virtue of submitting a bid, guarantee that he or she has not been a party with other bidders to an agreement to bid a fixed or uniform price. Violation of this implied guarantee shall render void the bids of participating bidders. Any disclosure to or acquisition by a competitive bidder, in advance of the opening of the bids, of the terms or conditions of the bid submitted by another competitor may render the entire proceedings void and may require re-advertising for bids.

SPECIFICATIONS

20. QUESTIONS CONCERNING SPECIFICATIONS-Any information relative to interpretation of specifications and drawings shall be requested of the Purchasing Agent, in writing, in ample time before the opening of bids. No inquiries, if received by the Purchasing Agent within five (5) days of the date set for the opening of bids, will be given any consideration. Any material interpretation of a specification, as determined by the County Purchasing Agent, will be expressed in the form of an addendum to the specification which will be sent to all prospective bidders no later than three (3) days before the date set for receipt of bids. Oral answers will not be authoritative.

21. BRAND NAME OR EQUAL ITEMS-Unless otherwise provided in the invitation for bid, the name of a certain brand, make or manufacturer does not restrict bidders to the specific brand, make or manufacturer named; it conveys the general style, type, character, and quality of the article desired, and any article which the County in its sole discretion determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted.

22. FORMAL SPECIFICATIONS-When a solicitation contains a specification which states no substitutes, no deviation therefrom will be permitted and the bidder will be required to furnish articles in conformity with that specification.

The bidder shall abide by and comply with the true intent of the specifications and not take advantage of any unintentional error or omission, but shall fully complete every part as the true intent and meaning of the specifications and drawings. Whenever the mention is made of any articles, material, or workmanship to be in accordance with laws, ordinances, building codes, underwriter's codes, A.S.T.M. regulations or similar expressions, the requirements of these laws, ordinances, etc., shall be construed as to the minimum requirements of these specifications.

23. FEDERAL SPECIFICATIONS-Any Federal Specifications referred to herein may be obtained from the GSA Federal Supply Service Bureau - Specification Section, 470 East L'Enfant Plaza, S.W., Suite #8100, Washington, D.C. 20407 (Voice: 1-202-619-8925, Fax: 1-202-619-8978).

AWARD

24. AWARD OR REJECTION OF BIDS-The Purchasing Agent shall award the contract to the lowest responsive and responsible bidder complying with all provisions of the IFB, provided the bid price is reasonable and it is in the best interest of the County to accept it. Awards made in response to a RFP will be made to the highest qualified offeror whose proposal is determined, in writing, to be the most advantageous to the County taking into consideration the evaluation factors set forth in the RFP. The Purchasing Agent reserves the right to award a contract by individual items, in the aggregate, or in combination thereof, or to reject any or all bids and to waive any informality in bids received whenever such rejection or waiver is in the best interest of the County. Award may be made to as many bidders as deemed necessary to fulfill the anticipated requirements of Fairfax County. The Purchasing Agent also reserves the right to reject the bid of a bidder deemed to be a non-responsible bidder.

In determining the responsibility of a bidder, the following criteria will be considered:

- a. The ability, capacity and skill of the bidder to perform the contract or provide the service required;
- b. Whether the bidder can perform the contract or provide the service promptly, or within the time specified, without delay or interference;
- c. The character, integrity, reputation, judgment, experience and efficiency of the bidder;
- d. The quality of performance of previous contracts or services;
- e. The previous and existing compliance by the bidder with laws and ordinances relating to the contract or services;
- f. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service;
- g. The quality, availability and adaptability of the goods or services to the particular use required;
- h. The ability of the bidder to provide future maintenance and service for the use of the subject of the contract;
- i. The number and scope of the conditions attached to the bid;
- j. Whether the bidder is in arrears to the County on debt or contract or is a defaulter on surety to the County or whether the bidder's County taxes or assessments are delinquent; and
- k. Such other information as may be secured by the County Purchasing Agent having a bearing on the decision to award the contract. If an apparent low bidder is not awarded a contract for reasons of nonresponsibility, the County Purchasing Agent shall so notify that bidder and shall have recorded the reasons in the contract file.

25. NOTICE OF ACCEPTANCE/CONTRACT DOCUMENTS-A written award (or Acceptance Agreement) mailed (or otherwise furnished) to the successful bidder within the time for acceptance specified in the solicitation shall be deemed to result in a binding contract. The following documents which are included in the solicitation shall be incorporated by reference in the resulting contract and become a part of said contract:

- a. County of Fairfax Solicitation Form/Acceptance Agreement (Cover Sheet) and other documents which may be incorporated by reference, if applicable,
- b. General Conditions and Instructions to Bidders,
- c. Special Provisions and Specifications,
- d. Pricing Schedule,
- e. Any Addenda/Amendments/Memoranda of Negotiations

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

26. TIE-BIDS – If all bids are for the same total amount or unit price (including authorized discounts and delivery times), and if the public interest will not permit the delay of readvertisement for bids, the County Purchasing Agent is authorized to award the contract to the resident Fairfax County tie bidder whose firm has its principal place of business in the County, or if there be none, to the resident Virginia tie bidder, or if there be none, to one of the tie bidders by drawing lots in public; or the County Purchasing Agent may purchase the goods or services in the open market except that the price paid shall not exceed the lowest contract bid price submitted for the same goods or services. The decision of the County to make award to one or more such bidders shall be final.

27. PROMPT PAYMENT DISCOUNT-

- a. Unless otherwise specified in the solicitation, prompt payment discounts requiring payment in less than fifteen (15) days will not be considered in evaluating a bid for award. However, even though not considered in the evaluation, such discounts will be taken if payment is to be made within the discount period.
- b. In connection with any discount offered, time will be computed from the date of delivery of the supplies to the carrier when delivery, inspection and acceptance are at the point of origin; or, from date of delivery, inspection and acceptance at destination; or, from date correct invoice or voucher is received in the office specified by the County, if the latter is later than the date of acceptance. In the event the bidder does not indicate a prompt payment discount, it shall be construed to mean NET 30 days.

For the purpose of earning the discount, payment is deemed to be made as of the date of mailing of the County check or issuance of an Electronic Funds Transfer.

28. INSPECTION-ACCEPTANCE-For determining acceptance of supplies in accordance with the provisions of the prompt payment discount paragraph, inspection and acceptance shall be accomplished only after examination (including testing) of supplies and services to determine whether the supplies and services conform to the contract requirements. Acceptance shall occur only after receipt and inspection provided such inspection, as appropriate, is accomplished within a reasonable time.

29. DEFINITE BID QUANTITIES-Where definite quantities are specifically stated, acceptance will bind the County to order quantities specified and to pay for, at contract prices, all such supplies or services delivered that meet specifications and conditions of the contract. However, the County will not be required to accept delivery of any balances unordered, as of the contract expiration date, unless the Contractor furnished the Purchasing Agent with a statement of unordered balances not later than ten (10) days after the termination date of the contract.

30. REQUIREMENT BID QUANTITIES-On "Requirement" bids, acceptance will bind the County to pay for, at unit bid prices, only quantities ordered and delivered. Where the County specifies estimated quantities, the Contractor shall not be required to deliver more than ten (10) percent in excess of the estimated quantity of each item, unless otherwise agreed upon.

CONTRACT PROVISIONS

31. TERMINATION OF CONTRACTS-Contracts will remain in force for full periods specified and/or until all articles ordered before date of termination shall have been satisfactorily delivered and accepted and thereafter until all requirements and conditions shall have been met, unless:

- a. Terminated prior to expiration date by satisfactory deliveries of entire contract requirements, or upon termination by the County for Convenience or Cause.
- b. Extended upon written authorization of the Purchasing Agent and accepted by Contractor, to permit ordering of unordered balances or additional quantities at contract prices and in accordance with contract terms.

32. TERMINATION FOR CONVENIENCE-A contract may be terminated in whole or in part by the County in accordance with this clause whenever the County Purchasing Agent shall determine that such a termination is in the best interest of the County. Any such termination shall be effected by delivery to the Contractor at least five (5) working days prior to the termination date of a Notice of Termination specifying the extent to which performance shall be terminated and the date upon which termination becomes effective. An equitable adjustment in the contract price shall be made for completed service, but no amount shall be allowed for anticipated profit on unperformed services.

33. TERMINATION OF CONTRACT FOR CAUSE-

- a. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his or her obligations under this contract, or if the Contractor violates any of the covenants, agreements, or stipulations of this contract, in addition to the County's remedies under the contract and all other rights available at law or in equity, the County shall have the right to immediately terminate this contract. Such termination shall be effected by delivering a notice of termination to the Contractor at any time specifying the effective date of such termination. In such event all finished or unfinished documents, data, studies, surveys, drawings, maps, models, and reports prepared by the Contractor under the contract shall, at the option of the County, become its property and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents.
- b. Notwithstanding the above, the Contractor shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of contract by the Contractor for the purpose of set off until such time as the exact amount of damages due to the County from the Contractor is determined.

34. CONTRACT ALTERATIONS-No alterations in the terms of a contract shall be valid or binding upon the County unless made in writing and signed by the Purchasing Agent or his or her authorized agent.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

35. SUBLETTING OF CONTRACT OR ASSIGNMENT OF CONTRACT FUNDS-It is mutually understood and agreed that the Contractor shall not assign, transfer, convey, sublet or otherwise dispose of his or her contractual duties to any other person, firm or corporation, without the previous written consent of the Purchasing Agent. If the Contractor desires to assign his or her right to payment of the contract, Contractor shall notify the Purchasing Agent immediately, in writing, of such assignment of right to payment. In no case shall such assignment of contract relieve the Contractor from his or her obligations or change the terms of the contract.

36. FUNDING-A contract shall be deemed binding only to the extent of appropriations available to each Agency for the purchase of goods and services.

37. DELIVERY/SERVICE FAILURES-Failure of a Contractor to deliver goods or services within the time specified, or within reasonable time as interpreted by the Purchasing Agent, or failure to make replacements/corrections of rejected articles/services when so requested, immediately or as directed by the Purchasing Agent, shall constitute authority for the Purchasing Agent to purchase in the open market articles/services of comparable grade/quality to replace the services, articles rejected, and/or not delivered. On all such purchases, the Contractor shall reimburse the County, within a reasonable time specified by the Purchasing Agent, for any expense incurred in excess of contract prices. Such purchases shall be deducted from the contract quantities if applicable. Should public necessity demand it, the County reserves the right to use or consume articles delivered or services performed which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Agent.

38. NON-LIABILITY-The Contractor shall not be liable in damages for delay in shipment or failure to deliver when such delay or failure is the result of fire, flood, strike, the transportation carrier, act of God, act of Government, act of an alien enemy or by any other circumstances which, in the Purchasing Agent's opinion, are beyond the control of the Contractor. Under such circumstances, however, the Purchasing Agent may, at his or her discretion, cancel the contract.

39. NEW GOODS, FRESH STOCK-All Contractors, unless otherwise specifically stated, shall provide new commodities, fresh stock, latest model, design or pack.

40. NON-DISCRIMINATION-During the performance of this contract, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
- b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such Contractor is an equal opportunity employer.
- c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- d. The Contractor will include the provisions of the foregoing paragraphs a, b, and c above in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.
- e. Contractor and Subcontractor hereunder shall, throughout the term of this contract, comply with the Human Rights Ordinance, Chapter 11 of the Code of the County of Fairfax, Virginia, as reenacted or amended.

41. SMALL AND MINORITY BUSINESS UTILIZATION

- a. It is the policy of the County of Fairfax as declared by the Fairfax County Board of Supervisors' adoption of a Small and Minority Business Enterprise Program, April 6, 1981, that Fairfax County and its employees undertake every effort to increase opportunity for utilization of small or minority businesses in all aspects of procurement to the maximum extent feasible.
- b. Where it is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the contractor is encouraged to offer such subcontracting opportunities to small, women and minority businesses.
- c. Where Federal grants or monies are involved it is the policy of Fairfax County, through its agents and employees, to comply with the requirements set forth in the U.S. Office of Management and Budget Circular No. A-102, uniform administrative requirements for Grants and Cooperative Agreements with State and Local Governments, as they pertain to small and minority business utilization.

42. GUARANTEES & WARRANTIES-All guarantees and warranties required shall be furnished by the Contractor and shall be delivered to the Purchasing Agent before final payment on the contract is made. Unless otherwise stated, manufacturer's standard warranty applies.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

43. PRICE REDUCTION-If at any time after the date of the bid the Contractor makes a general price reduction in the comparable price of any material covered by the contract to customers generally, an equivalent price reduction based on similar quantities and/or considerations shall apply to this contract for the duration of the contract period (or until the price is further reduced). Such price reduction shall be effective at the same time and in the same manner as the reduction in the price to customers generally. For purpose of this provision, a "general price reduction" shall mean any horizontal reduction in the price of an article or service offered (1) to Contractor's customers generally, or (2) in the Contractor's price schedule for the class of customers, i.e., wholesalers, jobbers, retailers, etc., which was used as the basis for bidding on this solicitation. An occasional sale at a lower price, or sale of distressed merchandise at a lower price, would not be considered a "general price reduction" under this provision. The Contractor shall submit his or her invoice at such reduced prices indicating on the invoice that the reduction is pursuant to the "Price Reduction" provision of the contract documents. The Contractor in addition will within ten days of any general price reduction notify the Purchasing Agent of such reduction by letter. **FAILURE TO DO SO MAY REQUIRE TERMINATION OF THE CONTRACT.** Upon receipt of any such notice of a general price reduction, all ordering offices will be duly notified by the Purchasing Agent.

The Contractor, if requested, shall furnish, within ten days after the end of the contract period, a statement certifying either (1) that no general price reduction, as defined above, was made after the date of the bid, or (2) if any such general price reductions were made, that as provided above, they were reported to the Purchasing Agent within ten (10) days and ordering offices were billed at the reduced prices. Where one or more such general price reductions were made, the statement furnished by the Contractor shall include with respect to each price reduction (1) the date when notice of any such reduction was issued, (2) the effective date of the reduction, and (3) the date when the Purchasing Agent was notified of any such reduction.

44. CHANGES-Should it become proper or necessary in the execution of this contract to make any change in design, or to make any alterations which will increase the expense, the Purchasing Agent shall determine an equitable adjustment. No payment shall be made to the Contractor for any extra material or services, or of any greater amount of money than stipulated to be paid in the contract, unless some changes in or additions to the contract requiring additional outlay by the Contractor shall first have been expressly authorized and ordered in writing by contract amendment or otherwise furnished by the Purchasing Agent.

45. PLACING OF ORDERS-Orders against contracts will be placed with the Contractor on a Purchase Order (or Procurement Card) executed and released by the Purchasing Agent or his or her designee. The Purchase Order must bear the appropriate contract number and date. Where Blanket Purchase Agreements (BPAs) have been executed and a Blanket Purchase Order has been released by the Purchasing Agent, telephonic orders may be placed directly with the Contractor by authorized personnel in the ordering Agency.

DELIVERY PROVISIONS

46. SHIPPING INSTRUCTIONS - CONSIGNMENT-Unless otherwise specified in the solicitation each case, crate, barrel, package, etc., delivered under the contract must be plainly stenciled or securely tagged, stating the Contractor's name, purchase order number, and delivery address as indicated in the order. Where shipping containers are to be used, each container must be marked with the purchase order number, name of the Contractor, the name of the item, the item number, and the quantity contained therein. Deliveries must be made within the hours of 8:00 AM - 3:00 PM. Deliveries at any other time will not be accepted unless specific arrangements have been previously made with the receiver at the delivery point. No deliveries will be accepted on Saturdays, Sundays and holidays, unless previous arrangements have been made. It shall be the responsibility of the Contractor to insure compliance with these instructions for items that are drop-shipped.

47. RESPONSIBILITY FOR SUPPLIES TENDERED-Unless otherwise specified in the solicitation, the Contractor shall be responsible for the materials or supplies covered by the contract until they are delivered at the designated point, but the Contractor shall bear all risk on rejected materials or supplies after notice of rejection. Rejected materials or supplies must be removed by and at the expense of the Contractor promptly after notification of rejection, unless public health and safety require immediate destruction or other disposal of rejected delivery. If rejected materials are not removed by the Contractor within ten (10) days after date of notification, the County may return the rejected materials or supplies to the Contractor at his or her risk and expense or dispose of them as its own property.

48. INSPECTIONS-Inspection and acceptance of materials or supplies will be made after delivery at destinations herein specified unless otherwise stated. If inspection is made after delivery at destination herein specified, the County will bear the expense of inspection except for the value of samples used in case of rejection. Final inspection shall be conclusive except in regard to latent defects, fraud or such gross mistakes as to amount to fraud. Final inspection and acceptance or rejection of the materials or supplies will be made as promptly as practicable, but failure to inspect and accept or reject materials or supplies shall not impose liability on the County for such materials or supplies as are not in accordance with the specifications.

49. COMPLIANCE-Delivery must be made as ordered and in accordance with the solicitation or as directed by the Purchasing Agent when not in conflict with the bid. The decision of the Purchasing Agent as to reasonable compliance with delivery terms shall be final. Burden of proof of delay in receipt of goods by the purchaser shall rest with the Contractor. Any request for extension of time of delivery from that specified must be approved by the Purchasing Agent, such extension applying only to the particular item or shipment affected. Should the Contractor be delayed by the County, there shall be added to the time of completion a time equal to the period of such delay caused by the County. However, the contractor shall not be entitled to claim damages or extra compensation for such delay or suspension. These conditions may vary for construction contracts. See Special Provisions for the individual solicitation.

50. POINT OF DESTINATION-All materials shipped to the County must be shipped F.O.B. DESTINATION unless otherwise stated in the contract or purchase order. The materials must be delivered to the "Ship to" address indicated on the purchase order.

51. ADDITIONAL CHARGES-Unless bought F.O.B. "shipping point" and Contractor prepays transportation, no delivery charges shall be added to invoices except when express delivery is authorized and substituted on orders for the method specified in the contract. In such cases, difference between freight or mail and express charges may be added to invoice.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

52. METHOD AND CONTAINERS-Unless otherwise specified, goods shall be delivered in commercial packages in standard commercial containers, so constructed as to ensure acceptance by common or other carrier for safe transportation to the point of delivery. Containers become the property of the County unless otherwise specified by bidder.

53. WEIGHT CHECKING-Deliveries shall be subject to re-weighing over official sealed scales designated by the County. Payments shall be made on the basis of net weight of materials delivered. Normal shrinkage may be allowed in such instances where shrinkage is possible. Net weights only, exclusive of containers or wrapping, shall be paid for by the County.

54. DEMURRAGE AND RE-SPOTTING-The County will be responsible for demurrage charges only when such charges accrue because of the County's negligence in unloading the materials. The County will pay railroad charges due to the re-spotting of cars, only when such re-spotting is ordered by the County.

55. REPLACEMENT-Materials or components that have been rejected by the Purchasing Agent, in accordance with the terms of a contract, shall be replaced by the Contractor at no cost to the County.

56. PACKING SLIPS OR DELIVERY TICKETS-All shipments shall be accompanied by Packing Slips or Delivery Tickets and shall contain the following information for each item delivered:

1. The Purchase Order Number,
2. The Name of the Article and Stock Number (Supplier's),
3. The Fairfax County Identification Number (FCIN), if specified in the order,
4. The Quantity Ordered,
5. The Quantity Shipped,
6. The Quantity Back Ordered,
7. The Name of the Contractor.

Contractors are cautioned that failure to comply with these conditions shall be considered sufficient reason for refusal to accept the goods.

BILLING

57. BILLING-Billing for the Fairfax County Public Schools and for County agencies: Unless otherwise specified on the contract or purchase order (PO), invoices are to be submitted, in DUPLICATE, for each purchase order immediately upon completion of the shipment or services. If shipment is made by freight or express, the original Bill of Lading, properly receipted, must be attached to the invoice. Invoices should be mailed to the "BILL TO" address on the PO or to the appropriate address specified in the contract.

PAYMENTS

58. PAYMENT-Payment shall be made after satisfactory performance of the contract, in accordance with all of the provisions thereof, and upon receipt of a properly completed invoice. Fairfax County reserves the right to withhold any or all payments or portions thereof for Contractor's failure to perform in accordance with the provision of the contract or any modifications thereto.

59. PARTIAL PAYMENTS-Unless otherwise specified, partial payments will be made upon acceptance of materials or services so invoiced if in accordance with completion date. However, up to 5 percent (5%) of the value of the entire order may be retained until completion of contract.

60. PAYMENT FOR EQUIPMENT, INSTALLATION, AND TESTING-When equipment requires installation (which shall also be interpreted to mean erection and/or setting up or placing in position, service, or use) and test, and where such installation or testing is delayed, payment may be made on the basis of 50% of the contract price when such equipment is delivered on the site. A further allowance of 25% may be made when the equipment is installed and ready for test. The balance shall be paid after the equipment is tested and found to be satisfactory. If the equipment must be tested, but installation is not required to be made by the Contractor or if the equipment must be installed but testing is not required, payment may be made on the basis of 75% at the time of delivery and the balance shall be paid after satisfactory test or installation is completed.

GENERAL

61. GENERAL GUARANTY-Contractor agrees to:

- a. Save the County, its agents and employees harmless from liability of any nature or kind for the use of any copyrighted or uncopyrighted composition; secret process, patented or unpatented; invention; article or appliance furnished or used in the performance of a contract for which the Contractor is not the patentee, assignee, licensee or owner.
- b. Protect the County against latent defective material or workmanship and to repair or replace any damages or marring occasioned in transit or delivery.
- c. Furnish adequate protection against damage to all work and to repair damages of any kind to the building or equipment, to his or her own work or to the work of other contractors, for which his or her workers are responsible.
- d. Pay for all permits, licenses and fees and give all notices and comply with all laws, ordinances, rules and regulations of the County.
- e. Protect the County from loss or damage to County owned property while it is in the custody of the Contractor.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS**62. SERVICE CONTRACT GUARANTY**-Contractor agrees to:

- a. Furnish services described in the solicitation and resultant contract at the times and places and in the manner and subject to conditions therein set forth provided that the County may reduce the said services at any time.
- b. Enter upon the performance of services with all due diligence and dispatch, assiduously press to its complete performance, and exercise therein the highest degree of skill and competence.
- c. All work and services rendered in strict conformance to all laws, statutes, and ordinances and the applicable rules, regulations, methods and procedures of all government boards, bureaus, offices and other agents.
- d. Allow services to be inspected or reviewed by an employee of the County at any reasonable time and place selected by the County. Fairfax County shall be under no obligation to compensate Contractor for any services not rendered in strict conformity with the contract.
- e. Stipulate that the presence of a County Inspector shall not lessen the obligation of the Contractor for performance in accordance with the contract requirements, or be deemed a defense on the part of the Contractor for infraction thereof. The Inspector is not authorized to revoke, alter, enlarge, relax, or release any of the requirements of the contract documents. Any omission or failure on the part of the Inspector to disapprove or reject any work or material shall not be construed to be an acceptance of any such defective work or material. Notification of an omission or failure will be documented by the Purchasing Agent.

63. INDEMNIFICATION-Contractor shall indemnify, keep and save harmless the County, its agents, officials, employees and volunteers against claims of injuries, death, damage to property, theft, patent claims, suits, liabilities, judgments, cost and expenses which may otherwise accrue against the County in consequence of the granting of a contract or which may otherwise result therefrom, if it shall be determined that the act was caused through negligence or error, or omission of the Contractor or his or her employees, or that of the subcontractor or his or her employees, if any; and the Contractor shall, at his or her own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith; and if any judgment shall be rendered against the County in any such action, the Contractor shall, at his or her own expense, satisfy and discharge the same. Contractor expressly understands and agrees that any performance bond or insurance protection required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County as herein provided.

64. OFFICIALS NOT TO BENEFIT-

- a. Each bidder or offeror shall certify, upon signing a bid or proposal, that to the best of his or her knowledge no Fairfax County official or employee having official responsibility for the procurement transaction, or member of his or her immediate family, has received or will receive any financial benefit of more than nominal or minimal value relating to the award of this contract. If such a benefit has been received or will be received, this fact shall be disclosed with the bid or proposal or as soon thereafter as it appears that such a benefit will be received. Failure to disclose the information prescribed above may result in suspension or debarment, or rescission of the contract made, or could affect payment pursuant to the terms of the contract.
- b. Whenever there is reason to believe that a financial benefit of the sort described in paragraph "a" has been or will be received in connection with a bid, proposal or contract, and that the contractor has failed to disclose such benefit or has inadequately disclosed it, the County Executive, as a prerequisite to payment pursuant to the contract, or at any other time, may require the Contractor to furnish, under oath, answers to any interrogatories related to such possible benefit.
- c. In the event the bidder or offeror has knowledge of benefits as outlined above, this information should be submitted with the bid or proposal. If the above does not apply at time of award of contract and becomes known after inception of a contract, the bidder or offeror shall address the disclosure of such facts to the Fairfax County Purchasing Agent, 12000 Government Center Parkway, Suite 427, Fairfax, Virginia 22035-0013. Relevant Invitation/Request for Proposal Number (see cover sheet) should be referenced in the disclosure.

65. LICENSE REQUIREMENT-All firms doing business in Fairfax County, shall obtain a license as required by Chapter 4, Article 7, of The Code of the County of Fairfax, Virginia, as amended, entitled "Business, Professional and Occupational Licensing (BPOL) Tax." Questions concerning the BPOL Tax should be directed to the Department of Tax Administration, telephone (703) 222-8234 or visit: http://www.fairfaxcounty.gov/dta/business_tax.htm. The BPOL Tax number must be indicated in the space provided on the Cover Sheet, "Fairfax License Tax No." when appropriate.

66. AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH: A contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the *Code of Virginia* or as otherwise required by law. Any business entity described above that enters into a contract with a Fairfax County pursuant to the Fairfax County Purchasing Resolution shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. Fairfax County may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.

67. COVENANT AGAINST CONTINGENT FEES-The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For violation of this warranty, the County shall have the right to terminate or suspend this contract without liability to the County or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

68. VIRGINIA FREEDOM OF INFORMATION ACT-All proceedings, records, contracts and other public records relating to procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Virginia Freedom of Information Act (Reference Section 4.D., of the Fairfax County Purchasing Resolution)

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

BIDDER/CONTRACTOR REMEDIES

69. INELIGIBILITY-

- a. Any person or firm suspended or debarred from participation in County procurement shall be notified in writing by the County Purchasing Agent.
 1. The Notice of Suspension shall state the reasons for the actions taken and such decision shall be final unless the person or firm appeals within thirty (30) days of receipt of the Notice by instituting legal action as provided in the Code of Virginia.
 2. The Notice of Debarment shall state the reasons for the actions taken and the decision shall be final unless the person or firm appeals within thirty (30) days of receipt of the notice by instituting legal action as provided in the Code of Virginia.
- b. The County Purchasing Agent shall have the authority to suspend or debar a person or firm from bidding on any contract for the causes stated below:
 1. Conviction for commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract;
 2. Conviction under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a County contractor;
 3. Conviction under the state or federal antitrust statutes arising out of the submission of bids or proposals;
 4. Violation of contract provisions, as set forth below, of a character which is regarded by the County Purchasing Agent to be so serious as to justify suspension or debarment action:
 - (a) failure without good cause to perform in accordance with the specifications or within the time limit provided in the contract; or
 - (b) a recent record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts; provided, that failure to perform or unsatisfactory performance caused by acts beyond the control of the contractor shall not be considered to be a basis for suspension or debarment;
 5. Any other cause the County Purchasing Agent determines to be so serious and compelling as to affect responsibility as a contractor, such as debarment by another governmental entity for any cause listed herein, or because of prior reprimands;
 6. The contractor has abandoned performance or been terminated for default on any other Fairfax County project;
 7. The contractor is in default on any surety bond or written guarantee on which Fairfax County is an obligee.
- c. If, upon appeal, it is determined that the action taken by the County Purchasing Agent was arbitrary or capricious, or not in accordance with the Constitution of Virginia, statutes or regulations, the sole relief available to the person or firm shall be restoration of eligibility. The person or firm may not institute legal action until all statutory requirements have been met.

70. APPEAL OF DENIAL OF WITHDRAWAL OF BID-

- a. A decision denying withdrawal of a bid submitted by a bidder or offeror shall be final and conclusive unless the bidder appeals the decision within ten (10) days after receipt of the decision by instituting legal action as provided in the Code of Virginia. The bidder or offeror may not institute legal action until all statutory requirements have been met.
- b. If no bid bond was posted, a bidder refused withdrawal of bid under the provisions of Article 2, Section 4 a.9, of the Fairfax County Purchasing Resolution, prior to appealing, shall deliver to the County a certified check or cash bond in the amount of the difference between the bid sought to be withdrawn and the next low bid. Such security shall be released only upon a final determination that the bidder was entitled to withdraw the bid.
- c. If, upon appeal, it is determined that the decision refusing withdrawal of the bid was arbitrary or capricious, the sole relief shall be withdrawal of the bid.

71. APPEAL OF DETERMINATION OF NONRESPONSIBILITY-

- a. Any bidder who, despite being the apparent low bidder, is determined not to be a responsible bidder for a particular County contract shall be notified in writing by the County Purchasing Agent. Such notice shall state the basis for the determination, which shall be final unless the bidder appeals the decision within ten (10) days of receipt of the notice by instituting legal action as provided in the Code of Virginia. The bidder may not institute legal action until all statutory requirements have been met.
- b. If, upon appeal, it is determined that the decision of the County Purchasing Agent was arbitrary or capricious and the award for the particular County contract in question has not been made, the sole relief available to the bidder shall be a finding that the bidder is a responsible bidder for the County contract in question. Where the award has been made and performance has begun, the County may declare the contract void upon a finding that this action is in the best interest of the public. Where a contract is declared void, the performing contractor shall be compensated for the cost of performance up to the time of such declaration. In no event shall the performing contractor be entitled to lost profits.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

72. PROTEST OF AWARD OR DECISION TO AWARD-

- a. Any bidder or offeror may protest the award or decision to award a contract by submitting a protest in writing to the County Purchasing Agent, or an official designated by the County of Fairfax, no later than ten (10) days after the award or the announcement of the decision to award, whichever occurs first. Any potential bidder or offeror on a contract negotiated on a sole source or emergency basis who desires to protest the award or decision to award such contract shall submit such protest in the same manner no later than ten days after posting or publication of the notice of such contract as provided in Article 3, Section 4, of the Fairfax County Purchasing Resolution. However, if the protest of any actual or potential bidder or offeror depends in whole or in part upon information contained in public records pertaining to the procurement transaction which are subject to inspection under Article 2, Section 4d of the Fairfax County Purchasing Resolution, then the time within which the protest must be submitted shall expire ten days after those records are available for inspection by such bidder or offeror under Article 2, Section 4d, or at such later time as provided herein. No protest shall lie for a claim that the selected bidder or offeror is not a responsible bidder or offeror. The written protest shall include the basis for the protest and the relief sought. The County Purchasing Agent shall issue a decision in writing within ten (10) days of the receipt of the protest stating the reasons for the action taken. This decision shall be final unless the bidder or offeror appeals within ten (10) days of receipt of the written decision by instituting legal action as provided in the Code of Virginia.
- b. If prior to award it is determined that the decision to award is arbitrary or capricious, then the sole relief shall be a finding to that effect. The County Purchasing Agent shall cancel the proposed award or revise it to comply with the law. If, after an award, it is determined that an award of a contract was arbitrary or capricious, then the sole relief shall be as hereinafter provided. Where the award has been made but performance has not begun, the performance of the contract may be declared void by the County. Where the award has been made and performance has begun, the County Purchasing Agent may declare the contract void upon a finding that this action is in the best interest of the County. Where a contract is declared void, the performing contractor shall be compensated for the cost of performance at the rate specified in the contract up to the time of such declaration. In no event shall the performing contractor be entitled to lost profits.
- c. Pending final determination of a protest or appeal, the validity of a contract awarded and accepted in good faith in accordance with this article shall not be affected by the fact that a protest or appeal has been filed.
- d. An award need not be delayed for the period allowed a bidder or offeror to protest, but in the event of a timely protest, no further action to award the contract will be taken unless there is a written determination that proceeding without delay is necessary to protect the public interest or unless the bid or offer would expire.

73. CONTRACTUAL DISPUTES-

- a. Any dispute concerning a question of fact as a result of a contract with the County which is not disposed of by agreement shall be decided by the County Purchasing Agent, who shall reduce his decision to writing and mail or otherwise forward a copy to the contractor within ninety (90) days. The decision of the County Purchasing Agent shall be final and conclusive unless the contractor appeals within six (6) months of the date of the final written decision by instituting legal action as provided in the Code of Virginia. A contractor may not institute legal action, prior to receipt of the County Purchasing Agent's decision on the claim, unless the County Purchasing Agent fails to render such decision within the time specified.
- b. Contractual claims, whether for money or other relief, shall be submitted in writing no later than sixty days after final payment; however, written notice of the contractor's intention to file such claim shall have been given at the time of the occurrence or beginning of the work upon which the claim is based. Nothing herein shall preclude a contract from requiring submission of an invoice for final payment within a certain time after completion and acceptance of the work or acceptance of the goods. Pendency of claims shall not delay payment of amounts agreed due in the final payment.

74. LEGAL ACTION-No bidder, offeror, potential bidder or offeror, or contractor shall institute any legal action until all statutory requirements have been met.

75. COOPERATIVE PURCHASING-The County may participate in, sponsor, conduct or administer a cooperative procurement agreement on behalf of or in conjunction with one or more other public bodies, or public agencies or institutions or localities of the several states, of the United States or its territories, or the District of Columbia, for the purpose of combining requirements to increase efficiency or reduce administrative expenses in any acquisition of goods and services. Except for contracts for professional services, a public body may purchase from another public body's contract even if it did not participate in the request for proposal (RFP) or invitation for bid (IFB), if the RFP or IFB specified that the procurement was being conducted on behalf of other public bodies. Nothing herein shall prohibit the assessment or payment by direct or indirect means of any administrative fee that will allow for participation in any such arrangement.

76. PROFESSIONAL AFFILIATION-The Department of Purchasing & Supply Management holds membership in the National Institute of Governmental Purchasing, Inc., a non-profit, educational and technical organization that includes among its goals and objectives the study, discussion, and recommendation of improvements in governmental purchasing and the interchange of ideas and experiences on local state, and national governmental purchasing problems.

77. DRUG FREE WORKPLACE-During the performance of a contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purposes of this section, "drug-free workplace" means a site for the performance of work done in conjunction with a specific contract awarded to a contractor in accordance with this section, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

78. VENUE: This contract and its terms, including, but not limited to, the parties' obligations under it, the performance due from each party under it, and the remedies available to each party for breach of it, shall be governed by, construed and interpreted in accordance with the laws of the Commonwealth of Virginia. Any jurisdiction's choice of law, conflict of laws, rules, or provisions, including those of the Commonwealth of Virginia, that would cause the application of any laws other than those of the Commonwealth of Virginia shall not apply. Any and all disputes, claims and causes of action arising out of or in connection with this contract or any performance hereunder, shall be brought in the applicable court of Fairfax County, Virginia, or in the United States District Court, Eastern District of Virginia, Alexandria Division.

79. IMMIGRATION REFORM AND CONTROL ACT: Contractor certifies that it does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

80. CONTRACTOR NOT TO BENEFIT: Contractor agrees that the goods and/or services provided to Fairfax County pursuant to this Agreement are for the benefit of Fairfax County and that Contractor shall not undertake any actions or efforts stemming from or related to this Agreement that shall inure to the detriment of Fairfax County. Any information provided to the Contractor for the performance of this Contract shall not be used for any other purpose without the written consent of the Purchasing Agent.

APPROVED:

/S/ David P. Bobzien
COUNTY ATTORNEY

/S/ Cathy A. Muse
COUNTY PURCHASING AGENT

The following documents which are included in this Solicitation shall be incorporated by reference in the resulting contract and become a part of said contract:

- A. County of Fairfax Cover Sheet (DPSM30)
- B. Special Provisions & Technical Specifications (Attachment 1 PART A, Attachment 1 PART A1, Attachment 1 PART B)
- C. Appendix A (General Conditions)
- D. Appendix B:
 - Appendix B-1 Contact for Administration
 - Appendix B-2 Certification of Safety Violations
 - Appendix B-3 Pricing Schedule
 - Appendix B-4 References
 - Appendix B-5 Superintendent's Experience Record
 - Appendix B-6 SCC,
 - Appendix B-7 Small Business Classification Schedule
 - Appendix B-8 Sample Jurisdiction Listing
 - Appendix B-9 Subcontractors Notification Form
 - Appendix B Certification Regarding Ethics in Public Contracting)
- E. Appendix C (Qualification Form)
- F. Appendix D (P.E. Certification form)
- G. Appendix E (Temporary Wet Well Structure – Plans and Specifications)
- H. Appendix F (Odor Control Vent Valves)
- I. Appendix G (CCTV of Existing Sewer)
- J. Appendix H (Rehabilitation List)
- K. Appendix I (Colonial Avenue Map)

CONTACT FOR ADMINISTRATION:

NAME:

ADDRESS:

(Office) _____

TELEPHONE/FAX: (Office) _____

E-MAIL: _____

PAY TO ADDRESS: (If different from Firm address on Cover Sheet)

PURCHASE ORDER ADDRESS: (If different from Firm address on Cover Sheet)

CERTIFICATION OF SAFETY VIOLATIONS:

NAME(S) OF INSTALLER(S) AND/OR SUBCONTRACTOR: (Re: Paragraph 6)

NAME: _____

ADDRESS: _____

TELEPHONE NUMBER(S): _____

LIST SAFETY VIOLATIONS (Reference paragraph 6 Special Provisions).

If there were no safety violations list each state in which work was performed in past 3 (three) years (Ref. Paragraph 6.):

I hereby certify that the above information is correct to the best of my knowledge.

Principal
State of _____)

County of _____)

On this _____ day of _____, 20____, after first being duly sworn, appeared before me, the undersigned Notary Public and executed the foregoing instrument and acknowledge to me that he executed the same as and for the act and deed of said firm.

(SEAL) _____
Notary Public

My commission expires: _____

PRICING SCHEDULE

Provide all labor, supervision, materials, equipment, tools, transportation, and supplies required to complete gravity sewer lines and manhole rehabilitation at Colonial Avenue in accordance with the Special Provisions, Appendix (F-I), and Technical Specifications Part A, Part A1, and Part B				
ITEM NO.	DESCRIPTION	Est. Qty	UNIT	LUMP SUM
1	Rehabilitation of the gravity sewer lines using CIPP method and structural manhole rehabilitation at Colonial Avenue	1	Job	\$_____

Bidder(s) must provide the estimated price selected for the wet well structure:

\$_____

(Note: this price should be included in your lump sum price above)

Provide Projected Completion time_____days after notification to proceed.

Note: Project must be completed within 365 calendar days after notice to proceed

(Ref. Special Provisions, paragraph 4.3.).

References

List below three (3) references from similar projects/jobs where work was performed, within the past three (3) years. One reference must from similar projects/jobs where Manhole rehabilitation work was performed, over a period of at least 2 years, minimum of 1000 vertical feet of manhole rehabilitation or 100 manholes (ref. Special Provisions, paragraph 7.4):

1. Customer Name: _____
Project/Job Name: _____
Address: _____

(Primary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

(Secondary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

Date of Work: _____ Size and Length: _____

Description of the Scope of Work: _____

2. Customer Name: _____
Project/Job Name: _____
Address: _____

(Primary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

(Secondary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

Date of Work: _____ Size and Length: _____

Description of the Scope of Work: _____

3. Customer Name: _____
Project/Job Name: _____
Address: _____

(Primary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

(Secondary point) Contract Name: _____ Title: _____
Telephone Number: _____ E-mail: _____

Date of Work: _____ Size and Length: _____

Description of the Scope of Work: _____

SUPERINTENDENT'S EXPERIENCE RECORD
(ATTACH ADDITIONAL COPIES OF THIS FORM AS NECESSARY)

Name of Bidder:

Name of Superintendent-in-Charge:

Name of Location of Project	Length and Sizes of Sanitary Sewers Lined by CIPP Method (feet& inches)	Completion Date (mm/yy)	Total Cost of Project	Client Reference
				Name:
				Organization or Company:
				Address:
				Phone No.:
				Name:
				Organization or Company:
				Address:
				Phone No.:
				Name:
				Organization or Company:
				Address:
				Phone No.:
				Name:
				Organization or Company:
				Address:
				Phone No.:

VIRGINIA STATE CORPORATION COMMISSION (SCC)
REGISTRATION INFORMATION

The bidder:

☐ is a corporation or other business entity with the following SCC identification number:
_____ **-OR-**

☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust **-OR-**

☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the bidder in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from bidder's out-of-state location) **-OR-**

☐ is an out-of-state business entity that is including with this bid/proposal an opinion of legal counsel which accurately and completely discloses the undersigned bidder's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.

Please check the following box if you have not checked any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for bids: ☐

BUSINESS CLASSIFICATION

DEFINITIONS

Small Business – means a business, independently owned or operated by one or more individuals who are U.S. citizens or legal resident aliens, and together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years. One or more of the individual owners shall control both the management and daily business operations of the small business.

Minority-Owned Business - means a business concern that is at least 51% owned by one or more minority individuals who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership, or limited liability company or other entity, at least 51% of the equity ownership interest in the corporation, partnership, or limited liability company or other entity is owned by one or more minority individuals who are U.S. citizens or legal resident aliens, and both the management and daily business operations are controlled by one or more minority individuals.

Woman-Owned Business – means a business that is at least 51% owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership, or limited liability company or other entity, at least 51% of the equity ownership interest is owned by one or more women who are U.S. citizens or legal resident aliens, and both the management and daily business operations are controlled by one or more women.

YOU MUST CLASSIFY YOUR BUSINESS/ORGANIZATION BY MARKING THE APPROPRIATE BOXES ON THE COVER SHEET (DPSM 30) **This designation is required of all business/organizations including publicly traded corporations, non-profits, sheltered work shops, government organizations, partnerships, sole proprietorships, etc.**



COUNTY OF FAIRFAX
DEPARTMENT OF PURCHASING & SUPPLY MANAGEMENT
SMALL AND MINORITY BUSINESS ENTERPRISE PROGRAM (SMBEP)
12000 Government Center Parkway, Suite 427
Fairfax, Virginia 22035-0013
Fax: 703-324-3228

SUBCONTRACTOR (S) NOTIFICATION FORM

Contract Number/Title: _____

Prime Contractors Name: _____

Prime Contractor's Classification Code: _____ (from Business Classification Schedule)

In accordance with the Subcontracting paragraph of the Special Provisions for the above-cited contract, you are required to provide the County with names, addresses, anticipated dollar amount and small/minority classification (use code numbers from previous page) of each first-tier subcontractor. Please complete this form and return it to this office with your bid package.

Please check here if you are not using a subcontractor: _____

SUBCONTRACTOR(S) NAME	STREET ADDRESS	CITY	STATE	ZIP CODE	ANTICIPATED DOLLAR AMOUNT	SMALL/MINORITY CLASSIFICATION

Complete and return this form with your bid. Contract award may not be made without it.

Certification Regarding Ethics in Public Contracting

In submitting this bid or proposal, and signing below, Bidder/Offeror certifies the following in connection with a bid, proposal, or contract:

Check one:

☐

1. I have not given any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal or minimal value to any public employee or official have official responsibility for a procurement transaction.

☐

2. I have given a payment, loan, subscription, advance, deposit of money, services or anything of more than nominal or minimal value to a public employee or official have official responsibility for a procurement transaction, but I received consideration in substantially equal or greater value in exchange.

If 2 is selected, please complete the following:

Recipient: _____

Date of Gift: _____

Description of the gift and its value:

Description of the consideration received in exchange and its value:

Printed Name of Bidder/Offeror Representative: _____

Signature/Date: _____ / _____

Company Name: _____

Company Address: _____

City/State/Zip: _____

This certification supplements but does not replace the requirements set forth in paragraph 64 (OFFICIALS NOT TO BENEFIT) of the General Conditions and Instructions to Bidders included in this solicitation.

QUALIFICATION FORM

This Qualification Form will be used in the evaluation for this solicitation process, Sewer Rehabilitation – CIPP Method – Large Diameter Pipe and Manhole Rehabilitation for the County of Fairfax. The Bidder agrees that all information provided in this solicitation, to include all attachments, shall become a binding part of the contract award for Sewer Rehabilitation – CIPP Method – Large Diameter Pipe and Manhole Rehabilitation.

All bidders are reminded to include all supporting documentation that is required with the bid.

In order for the County to properly evaluate your firm for this solicitation, Vendors' Qualifications, please provide the following information:

A. GENERAL INFORMATION:

1. Name and Address of Firm

Name: _____
Address: _____
City: _____ State: _____ Zip: _____

2. Years of operation under the present firm or trade name: _____

3. Check One:

_____ Corporation
_____ Partnership
_____ Sole Proprietorship
_____ Joint Venture
_____ Other

4. If a Corporation, state:

Date of Incorporation: _____
State in which Incorporated: _____

5. If an out-of-state corporation:

If incorporate outside the Commonwealth of Virginia, but is currently authorized to do business in the Commonwealth, give the date of such authorization: _____

6. Name and Titles of Principal Officers

Date Elected

_____	_____
_____	_____
_____	_____

QUALIFICATION FORM

7. If a Partnership, state:

Date of Partnership: _____

Type of Partnership (General or Limited): _____

Names and Addresses of Partners:

8. If Joint Venture, state:

Date of Joint Venture: _____

Names and Addresses of Joint Venturers:

9. If Sole Proprietorship, state:

Name and Address of Sole Proprietor:

10. If Other than above, please describe:

B. KEY PROJECT STAFF AND EXPERIENCE:

The proposed Superintendent-in-Charge of the installation shall have a minimum of five (5) years of experience prior to bid opening and supervising the installation of CIPP for sanitary sewer pipes in North America. The proposed Superintendent-in-Charge shall have successfully installed a minimum of 50,000 linear feet of CIPP for sanitary sewer in North America ranging larger than 18-inches in diameter using the specific liner material and the specific cured-in-place pipe process proposed in their response to this solicitation prior to bid opening. Provide information about project experience of the proposed contract's Project Superintendent using the Superintendent's Experience Record form. In addition, describe this individual's proposed responsibility. Any Key project staff listed shall have passed the "Criminal History" Background Check.

QUALIFICATION FORM

C. CONTRACTOR'S EXPERIENCE RECORD:

Prospective bidder must have been in business in North America for a minimum of three (3) years, have successfully rehabilitated a minimum of 50,000 linear feet of sanitary sewer pipes ranging greater than 18-inches in diameter using the specific liner material within North America, and the specific cured-in-place pipe process proposed in their response to this solicitation. Bidders shall complete and submit Attachment A to provide to a list of sanitary sewer rehabilitation projects completed within the last three (3) years, which demonstrates the minimum experience criteria of 50,000 feet. Complete the Contractor's Experience Record Form, listing the following: size(s) and length(s) of the rehabilitated pipe for each project; total dollar value; and notate date of each project and reference(s) for each project to include names, addresses, and telephone numbers.

D. MANUFACTURER'S AFFILIATION OR LICENSING BY MANUFACTURER:

The Contractor performing the work on this contract shall be employees of the company manufacturing the CIPP system components or are to be licensed by the rehabilitation system manufacturer.

1. Are the Bidder and those performing the CIPP installation work employed by the company manufacturing the CIPP system components? Yes __, No __
2. If answer to Question J.1 is "no", the Bidder shall provide documentation of licensing by the manufacturer for the Contractor installing the lining system.

E. MANUFACTURERS AND PRODUCTS RECORD:

Manufacturer(s) must have been in business in North America for a minimum of five (5) years. They must have successful product installations summing a minimum of 500,000 linear feet. The bidder must provide the manufacturer must certify documentation satisfying this criterion.

F. SCOPE OF WORK AND IMPLEMENTATION:

Based on the requirements in the Solicitation, attach a detailed description of the cured-in-place pipe installation process proposed and the specifications for all of the materials and products proposed.

G. SUBCONTRACTED SERVICES:

Identify Subcontractor firms and list their role and their portion of the work below. If subcontractor(s) specific to this project cannot be identified at this time, the Bidder shall complete the information for firms used in the recent past and define this on the completed Item:

Name of Firm: _____

Proposed work to be performed on this project: _____

Approximate percentage of total proposed project scope: _____

Provide, as additional attachments, the name of each firm and the firm's qualifications for firms that the Bidder will use as Subcontractors for this Project. Submittals of qualifications of subcontracted specialty firms shall be consistent with Special Provisions paragraph 52. Also, provide resumes of individuals from the firms whom the Subcontractors will use for completion of the rehabilitation work.

QUALIFICATION FORM

H. CONTRACTOR'S LICENSE:

Bidders are required to possess a valid Commonwealth of Virginia Contractor's License, at the time of bid submission, to be considered a qualified bidder. A valid Commonwealth of Virginia Contractor's License is required by Special Provisions paragraph 11. Title 54 1-1115 and 54.1-1100 of the Code of Virginia constitutes "Bidding upon the construction, removal, repair or improvements to or upon real property owned, controlled or leased by another person without a license " as commission of a Class 1 misdemeanor.

State of Virginia Contractor's License No.: _____ Class Type: _____
Date of Expiration: _____
Classifications (Highway, Plumbing, etc): _____

I. CONTACT PERSON:

The County may contact bidders during the evaluation of the bids to obtain clarification, if needed.

Name and Address of Contact:

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Telephone: _____ Fax (Office): _____

J. PROPOSED MATERIAL/PROCESS:

Provide a general description of the materials and procedures to be used in the rehabilitation process including the following:

- Type and properties of lining material and resins
- Description of inspection, cleaning, installation, lateral reinstatement, and quality control procedures.
- Public notification procedures
- Range of pipe diameters that can be rehabilitated with this process.
- Maximum length between access points.
- Methods for maintaining flows.
- Proposed corrective methods for installation problems:
 - incomplete curing
 - non-uniform installation
 - missed service lateral
 - service lateral plugging
 - Styrene odor
- Terms of liner system manufacturer's warranty

PROFESSIONAL ENGINEER CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the Commonwealth of Virginia, and that he/she is employed by:

(Name of Contractor)

to design cured-in-place liner segments. The undersigned further certifies that he/she has performed the design of the specified liner diameters, thickness, and a design that is in conformance with all applicable local, state, and federal codes, rules, and regulations. It is further certified that the signature and Professional Engineer Stamp will be affixed to all calculations and drawings used in and resulting from the design.

The undersigned hereby agrees to make all original drawings and calculations available to the County of Fairfax, Wastewater Collection Division within seven calendar days following a request by the County.

Professional Engineer Stamp

By: _____